

UNITED STATES DEPARTMENT OF THE INTERIOR

HAROLD L. ICKES, Secretary

GEOLOGICAL SURVEY

W. C. MENDENHALL, Director

Water Resources Branch,

Geological Survey,

Water-Supply Paper 933

Box 3106, Capitol Station

Oklahoma City, Okla.

# SURFACE WATER SUPPLY *of the* UNITED STATES

1941

PART 13

SNAKE RIVER BASIN

Prepared under the direction of

GLENN L. PARKER, Chief Hydraulic Engineer

AND OF G. H. CANFIELD, LYNN CRANDALL, ROBERT FOLLANSBEE

T. R. NEWELL, A. B. PURTON, AND F. M. VEATCH

District Engineers

In cooperation with the States of

IDAHO, OREGON, WASHINGTON, AND WYOMING

and other agencies



UNITED STATES

GOVERNMENT PRINTING OFFICE

WASHINGTON : 1942

# CONTENTS

	Page
Scope of work.....	1
Definition of terms.....	1
Explanation of data.....	1
Accuracy of field data and computed results.....	3
Publications.....	4
Records of discharge collected by agencies other than the Geological Survey.....	9
Cooperation.....	10
Division of work.....	10
Gaging-station records.....	11
Snake River main stem.....	11
Jackson Lake at Moran, Wyo.....	11
Snake River at Moran, Wyo.....	12
Snake River at Calamity Point, near Irwin, Idaho.....	13
Snake River near Heise, Idaho.....	14
Diversions from Snake River between Heise and Shelley gaging stations, Idaho.....	15
Snake River near Shelley, Idaho.....	16
Diversions from Snake River between Shelley and Clough Ranch gaging stations, Idaho.....	17
Snake River at Clough Ranch, near Blackfoot, Idaho.....	18
American Falls Reservoir at American Falls, Idaho.....	19
Snake River at Neesley, Idaho.....	21
Lake Walcott near Minidoka, Idaho.....	22
Snake River near Minidoka, Idaho.....	23
Snake River at Milner, Idaho.....	24
Snake River near Kimberly, Idaho.....	25
Snake River near Twin Falls, Idaho.....	26
Snake River near Hagerman, Idaho.....	27
Snake River below Lower Salmon Falls, near Hagerman, Idaho.....	28
Snake River at King Hill, Idaho.....	29
Snake River near Murphy, Idaho.....	30
Snake River at Weiser, Idaho.....	31
Snake River at Oxbow, Oreg.....	32
Snake River near Clarkston, Wash.....	33
Flat Creek Basin.....	35
Flat Creek near Jackson, Wyo.....	35
Salt River Basin.....	36
Salt River near Smoot, Wyo.....	36
Salt River at Wyoming-Idaho State line.....	37
Cottonwood Creek near Smoot, Wyo.....	38
Strawberry Creek near Bedford, Wyo.....	39
Henrys Fork Basin.....	40
Henrys Fork near Lake, Idaho.....	40
Island Park Reservoir near Island Park, Idaho.....	41
Henrys Fork near Island Park, Idaho.....	42
Henrys Fork at Warm River, Idaho.....	43
Henrys Fork near Ashton, Idaho.....	44
Diversions from Henrys Fork between Ashton and St. Anthony gaging stations, Idaho.....	45
Henrys Fork at St. Anthony, Idaho.....	46
Diversions from Henrys Fork between St. Anthony and Rexburg gaging stations, Idaho.....	47
Henrys Fork near Rexburg, Idaho.....	48
Smaller reservoirs in Henrys Fork Basin.....	49
Diversions from Fall River above gaging station near Squirrel, Idaho.....	50
Fall River near Squirrel, Idaho.....	51
Diversions from Fall River between Squirrel and Chester gaging stations, Idaho.....	52
Fall River near Chester, Idaho.....	53
Teton River near Teton, Idaho.....	54
Teton River near St. Anthony, Idaho.....	55
Diversions from Teton River between St. Anthony gaging station and mouth, Idaho.....	56
Blackfoot River Basin.....	57
Blackfoot River near Blackfoot, Idaho.....	57
Mud Lake-Lost River Basin.....	58
Mud Lake Basin.....	58
Mud Lake near Terreton, Idaho.....	58
Camas Creek at Eighteenmile Shearing Corral, near Kilgore, Idaho.....	59
Camas Creek at Camas, Idaho.....	60
Beaver Creek at Spencer, Idaho.....	61
Beaver Creek at Dubois, Idaho.....	62
Beaver Creek at Camas, Idaho.....	63
Medicine Lodge Creek near Argora, Idaho.....	64
Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho.....	65
Medicine Lodge Creek near Small, Idaho.....	66
Little Lost River Basin.....	67
Little Lost River near Howe, Idaho.....	67
Blaine County Investment Co's canal near Howe, Idaho.....	68
Big Lost River Basin.....	69
Big Lost River at Howell Ranch, near Chilly, Idaho.....	69
Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho.....	70

## Gaging-station records--Continued.

## Mud Lake-Lost River Basin--Continued.

## Big Lost River Basin--Continued.

	Page
Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho.....	71
Mackay Reservoir near Mackay, Idaho.....	73
Big Lost River below Mackay Reservoir, near Mackay, Idaho.....	74
Warm Spring Creek (east channel) near Mackay, Idaho.....	75
Warm Spring Creek (west channel) near Mackay, Idaho.....	76
Sharp ditch near Mackay, Idaho.....	77
Portneuf River Basin.....	78
Portneuf River at Topaz, Idaho.....	78
Portneuf River at Pocatello, Idaho.....	79
Birch Creek near Downey, Idaho.....	80
Tributaries and diversions between Portneuf River and Salmon Falls Creek.....	81
North Side Minidoka canal near Minidoka, Idaho.....	81
South Side Minidoka canal near Minidoka, Idaho.....	82
Goose Creek above Trapper Creek, near Oakley, Idaho.....	83
Oakley Reservoir near Oakley, Idaho.....	84
Trapper Creek near Oakley, Idaho.....	85
P. A. lateral near Milner, Idaho.....	86
Milner low-lift canal near Milner, Idaho.....	87
Gooding canal at Milner, Idaho.....	88
North Side Twin Falls canal at Milner, Idaho.....	89
South Side Twin Falls canal at Milner, Idaho.....	90
Rock Creek near Twin Falls, Idaho.....	91
Salmon Falls Creek Basin.....	92
Salmon Falls Creek near San Jacinto, Nev.....	92
Salmon River Canal Co. Reservoir near Rogerson, Idaho.....	93
Salmon River Canal Co. canal near Rogerson, Idaho.....	94
Big Wood River Basin.....	95
Big Wood River at Hailey, Idaho.....	95
Big Wood River near Bellevue, Idaho.....	97
Magic Reservoir near Richfield, Idaho.....	98
Big Wood River below Magic Dam, near Richfield, Idaho.....	99
Big Wood River at Gooding, Idaho.....	100
Big Wood River near Gooding, Idaho.....	101
Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho.....	102
Big Wood Slough at Hailey, Idaho.....	103
Camas Creek near Blaine, Idaho.....	104
Lincoln canal near Richfield, Idaho.....	105
Lincoln canal near Shoshone, Idaho.....	106
Thorn Creek spillway near Gooding, Idaho.....	107
Little Wood River at Campbell Ranch, near Carey, Idaho.....	108
Little Wood River near Carey, Idaho.....	109
Little Wood River near Richfield, Idaho.....	111
Little Wood River at Shoshone, Idaho.....	112
Silver Creek near Picabo, Idaho.....	113
King Hill canal near Hagerman, Idaho.....	114
Tributaries and diversions between Big Wood River and Owyhee River.....	115
Clover Creek near Bliss, Idaho.....	115
King Hill Creek near King Hill, Idaho.....	116
Little Canyon Creek near Glenns Ferry, Idaho.....	117
Bennett Creek near Bennett, Idaho.....	118
Mountain Home feeder canal near Mountain Home, Idaho.....	119
Mountain Home cooperative canal near Mountain Home, Idaho.....	120
Wickahoney Creek near Bruneau, Idaho.....	121
Jacks Creek near Bruneau, Idaho.....	122
Owyhee River Basin.....	123
Wild Horse Reservoir near Gold Creek, Nev.....	123
Owyhee River near Gold Creek, Nev.....	124
Owyhee River at Mountain City, Nev.....	125
Owyhee River above China diversion dam, near Owyhee, Nev.....	126
Owyhee River above Owyhee Reservoir, Oreg.....	127
Owyhee Reservoir at Owyhee Dam, near Nyssa, Oreg.....	128
Owyhee River below Owyhee Dam, Oreg.....	129
Boise River Basin.....	130
Boise River near Twin Springs, Idaho.....	130
Arrowrock Reservoir at Arrowrock, Idaho.....	131
Boise River at Dowling Ranch, near Arrowrock, Idaho.....	132
Boise River at Boise, Idaho.....	133
Boise River at Notus, Idaho.....	134
Diversions from Boise River, Idaho.....	135
Cottonwood Creek at Arrowrock Reservoir, Idaho.....	136
South Fork of Boise River near Lenox, Idaho.....	137
Grouse Creek near Arrowrock, Idaho.....	138
Little Camas canal at heading near Bennett, Idaho.....	139
Moore Creek above Granite Creek, near Idaho City, Idaho.....	140
Moore Creek above Thorn Creek, near Idaho City, Idaho.....	141
Moore Creek near Arrowrock, Idaho.....	142
Gold Hill Placer diversion from Moore Creek near Idaho City, Idaho.....	143
Granite Creek near Idaho City, Idaho.....	144
Bannock Creek near Idaho City, Idaho.....	145
Pine Creek above Barry Placer diversion near Idaho City, Idaho.....	146
Elk Creek above Gold Hill Placer diversion near Idaho City, Idaho.....	148
New York canal near Barber, Idaho.....	149
Cottonwood Gulch at Boise, Idaho.....	150
Deer Flat Reservoir near Caldwell, Idaho.....	151
Malheur River Basin.....	152
Malheur River near Drewsey, Oreg.....	152
Malheur River below Warm Springs Reservoir, near Riverside, Oreg.....	153

## Gaging-station records--Continued.

Malheur River Basin--Continued.	Page
Malheur River near Hope, Oreg.	154
Reservoirs in Malheur River Basin, Oreg.	155
North Fork of Malheur River above Agency Valley Reservoir, near Beulah, Oreg.	156
North Fork of Malheur River at Beulah, Oreg.	157
Payette River Basin.	158
South Fork of Payette River at Lowman, Idaho.	158
South Fork of Payette River near Garden Valley, Idaho.	159
South Fork of Payette River near Banks, Idaho.	160
Payette River near Horseshoe Bend, Idaho.	161
Payette River near Emmett, Idaho.	162
Payette River near Payette, Idaho.	163
Clear Creek at Lowman, Idaho.	164
Deadwood Reservoir near Lowman, Idaho.	165
Deadwood River below Deadwood Reservoir, near Lowman, Idaho.	166
Deadwood River near Lowman, Idaho.	167
Payette Lake at Lardo, Idaho.	168
North Fork of Payette River at Lardo, Idaho.	169
North Fork of Payette River at Cascade, Idaho.	170
North Fork of Payette River near Smiths Ferry, Idaho.	171
Lake Fork of Payette River above reservoir near McCall, Idaho.	172
Lake Fork Reservoir near McCall, Idaho.	173
Lake Fork of Payette River below Lake Irrigation District canal, near McCall, Idaho.	174
Lake Irrigation District canal near McCall, Idaho.	175
Porter Creek near Gardena, Idaho.	176
Weiser River Basin.	177
Weiser River at Tamarack, Idaho.	177
Weiser River at Starkey, Idaho.	178
Weiser River near Council, Idaho.	179
Weiser River near Cambridge, Idaho.	180
Weiser River above Crane Creek, near Weiser, Idaho.	181
East Fork of Weiser River near Council, Idaho.	182
West Fork of Weiser River near Fruitvale, Idaho.	183
Lost Valley Reservoir near Tamarack, Idaho.	184
Lost Creek near Tamarack, Idaho.	185
Hornet Creek near Council, Idaho.	186
Middle Fork of Weiser River near Mesa, Idaho.	187
Mesa Orchards canal near Mesa, Idaho.	188
Johnson Creek below Johnson Park near Council, Idaho.	189
Rush Creek at Cambridge, Idaho.	190
Pine Creek near Cambridge, Idaho.	191
Little Weiser River near Indian Valley, Idaho.	192
Crane Creek Reservoir near Midvale, Idaho.	193
Crane Creek near Midvale, Idaho.	194
Crane Creek at mouth, near Weiser, Idaho.	195
Weiser Irrigation District canal near Weiser, Idaho.	196
Mann Creek near Weiser, Idaho.	197
Burnt River Basin.	198
Unity Reservoir near Unity, Oreg.	198
Burnt River near Hereford, Oreg.	199
Powder River Basin.	200
Powder River at Salisbury, Oreg.	200
Powder River near Robinsnet, Oreg.	201
Imnaha River Basin.	202
Imnaha River at Imnaha, Oreg.	202
Salmon River Basin.	203
Salmon River near Obsidian, Idaho.	203
Salmon River below Valley Creek, at Stanley, Idaho.	204
Salmon River below Yankee Fork, near Clayton, Idaho.	205
Salmon River near Challis, Idaho.	206
Salmon River at Salmon, Idaho.	207
Salmon River at Whitebird, Idaho.	208
Alturas Lake Creek near Obsidian, Idaho.	209
Valley Creek at Stanley, Idaho.	210
Yankee Fork of Salmon River near Clayton, Idaho.	211
Pahsimeroi River near May, Idaho.	212
Lemhi River at Salmon, Idaho.	213
Middle Fork of Salmon River near Cape Horn, Idaho.	214
Bear Valley Creek near Cape Horn, Idaho.	215
South Fork of Salmon River near Knox, Idaho.	216
South Fork of Salmon River near Warren, Idaho.	217
East Fork of South Fork of Salmon River at Stibnite, Idaho.	218
East Fork of South Fork of Salmon River near Stibnite, Idaho.	219
East Fork of South Fork of Salmon River near Yellow Pine, Idaho.	220
Johnson Creek at Yellow Pine, Idaho.	221
Boulder Creek near Tamarack, Idaho.	222
Grande Ronde River Basin.	223
Grande Ronde River at La Grande, Oreg.	223
Grande Ronde River at Rondowa, Oreg.	224
Catherine Creek near Union, Oreg.	225
East Fork of Wallowa River near Joseph, Oreg.	226
Wallowa Falls power-plant tailrace near Joseph, Oreg.	227
Hurricane Creek near Joseph, Oreg.	228
Lostine River near Lostine, Oreg.	229
Bear Creek near Wallowa, Oreg.	230
Asotin Creek Basin.	231
Asotin Creek near Asotin, Wash.	231

Gaging-station records--Continued.	Page
Clearwater River Basin.....	232
Selway River near Lowell, Idaho.....	232
Clearwater River at Kamiah, Idaho.....	233
Clearwater River at Spalding, Idaho.....	234
Lochsa River near Lowell, Idaho.....	235
South Fork of Clearwater River near Grangeville, Idaho.....	236
North Fork of Clearwater River near Ahsahka, Idaho.....	237
Mission Creek near Winchester, Idaho.....	238
Palouse River Basin.....	239
South Fork of Palouse River at Pullman, Wash.....	239
Miscellaneous discharge measurements.....	240
Index.....	243

---

 ILLUSTRATIONS
 

---

Plate 1. Gaging-station structures: A, Snake River at King Hill, Idaho; B, Snake River near Murphy, Idaho; C, Snake River near Clarkston, Wash.....	Page 2
---	-----------

## SURFACE WATER SUPPLY OF SNAKE RIVER BASIN, 1941

### SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1941. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 9,120 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1941, 4,850 gaging stations were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made at many other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Cooperation of the first kind is acknowledged in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 10.

### DEFINITION OF TERMS

The units in which stream-flow data are presented in this report and other terms used herein are defined as follows:

"Second-foot" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the runoff is distributed uniformly both as regards time and area.

"Runoff in inches" is the depth to which an area would be covered if all the water draining from it in a given period were uniformly distributed on its surface. It is used for comparing runoff with rainfall, which is usually expressed in inches.

An "acre-foot" is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet. The term is commonly used in connection with storage for irrigation.

"Second-foot-day" is the volume of water represented by a flow of 1 second-foot for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons and represents a runoff of 0.0372 inch from 1 square mile.

"Stage-discharge relation" is an abbreviation for the term "relation between gage height and discharge."

"Control" is a term used to designate a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural section, a reach of the channel, or an artificial structure.

### EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the records of stage and discharge

measurements in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge. Typical structures in use at gaging stations are shown on plate 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily mean gage height to these rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the "shifting-control method," in which correction factors based on individual discharge measurements are used in applying the gage heights to the rating tables.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources, which necessitates the use of the "slope method" in which the slope or fall in a reach of the stream is a factor in the determination of discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage, and for them the rate of change of stage is used as a factor in the determination of discharge.

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, which makes it impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for stations in the same or nearby basins. The days included in the periods of ice effect and the days during the winter period on which discharge measurements were made are indicated in the table by symbols referring to footnotes.

For most of the gaging stations on streams in the area covered by this report the data presented comprise a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and runoff. Skeleton rating tables are published for all stations except those at which the daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

The description of the station gives the type of gage, its latitude and longitude determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest stage, obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum discharge represents the lowest stage, unless otherwise qualified. Selected peak discharges with the times of their occurrence are given below the table of monthly discharge for some



A. SNAKE RIVER AT KING HILL, IDAHO.



B. SNAKE RIVER NEAR MURPHY, IDAHO.



C. SNAKE RIVER NEAR CLARKSTON, WASH.

GAGING-STATION STRUCTURES.



stations. This supplementary information is generally omitted for stations having drainage areas of less than 10 square miles or more than 10,000 square miles or if the peak discharges usually exceed the corresponding mean discharges for the day by less than 10 percent.

For stations equipped with nonrecording gages, the table of daily discharge gives the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For flashy floods the daily mean discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description. For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the table gives the discharge corresponding to the daily mean gage height. For stations subject to such fluctuation the daily mean gage height may not indicate the true daily mean discharge, which must be obtained by averaging the discharge for parts of the day or by using the discharge integrator, an instrument for obtaining the daily mean discharge from a continuous gage-height graph and containing as an essential element a curve representing the stage-discharge relation at the station.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the momentary discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" gives the average flow in cubic feet per second-during the month.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For a few of the more important lakes and reservoirs a table showing daily contents is given. A skeleton table of capacity at given stages is usually given in the first report in which data for a station are published but is omitted from succeeding reports.

#### ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily on (1) the permanency of the stage-discharge relation and (2) the accuracy of observations of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that, in general, the daily records are accurate within 5 percent; "good," within 10 percent; "fair," within 15 percent; and "poor," within 20 or a higher percent.

Yield at some stations as indicated by monthly means may vary widely from natural yield, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations figures of "second-foot per square mile" and "runoff in inches" are not published unless storage or diversion records are included indicating the extent of the regulation or diversion or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Figures of second-feet per square mile and runoff in inches are also omitted if the drainage area includes large noncontributing areas or if the average annual rainfall over the drainage area is less than 20 inches.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and therefore the discharge recorded

does not show the water supply available for further development, as prior appropriations below the station must first be satisfied.

The table of monthly discharge presents in summary the distribution of the flow past the station. The table of daily discharge affords opportunity for more detailed studies of the variation in flow. As further observations in each succeeding year may be expected to throw new light on data previously published, it should be borne in mind that such data are subject to revision in succeeding water-supply papers.

#### PUBLICATIONS

The results of stream-flow measurements are now published annually in 14 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

- Part 1. North Atlantic slope basins (St. John River to York River).  
 2. South Atlantic slope and eastern Gulf of Mexico basins (James River to Mississippi River).  
 3. Ohio River Basin.  
 4. St. Lawrence River Basin.  
 5. Hudson Bay and upper Mississippi River Basins.  
 6. Missouri River Basin.  
 7. Lower Mississippi River Basin.  
 8. Western Gulf of Mexico basins.  
 9. Colorado River Basin.  
 10. The Great Basin.  
 11. Pacific slope basins in California.  
 12. Pacific slope basins in Washington and upper Columbia River Basin.  
 13. Snake River Basin.  
 14. Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be obtained or consulted as explained below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will, on application, furnish lists giving prices.
2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.
3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey as follows:

##### East of the Mississippi River:

Albany, N. Y., 526 Federal Building.  
 Asheville, N. C., 220 Post Office Building.  
 Atlanta, Ga., 5 North Rhodes Center.  
 Augusta, Maine, Statehouse.  
 Baton Rouge, La., 124 Geology Building, Louisiana State University.  
 Boston, Mass., 945 Post Office Building.  
 Charleston, W. Va., 408 Union Building.  
 Charlottesville, Va., House G, Dawson Row, University of Virginia.  
 Chattanooga, Tenn., 442 Post Office Building.  
 College Park, Md., Engineering Building, University of Maryland.  
 Columbia, S. C., 119 United States Courthouse.  
 Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.  
 Harrisburg, Pa., 490 Education Building.  
 Hartford, Conn., 225 Capitol Building, 410 Asylum Street.  
 Indianapolis, Ind., 511 Board of Trade Building.  
 Jackson, Miss., 208 Millsaps Building.  
 Louisville, Ky., 652 Federal Building.  
 Madison, Wis., 666 State Office Building.  
 Montgomery, Ala., 507 Post Office Building.  
 Ocala, Fla., 302 Post Office Building.  
 St. Paul, Minn., 808 New Post Office Building.  
 Trenton, N. J., 228 Federal Building.  
 Urbana, Ill., 14 Post Office Annex, Elm Street.

##### West of the Mississippi River:

Austin, Tex., 302 West 15th Street.  
 Boise, Idaho, 429 Federal Building.  
 Denver, Colo., 230 Customhouse.  
 Fort Smith, Ark., 6 Post Office Building.  
 Helena, Mont., 408 Federal Building.  
 Honolulu, Hawaii, 225 Federal Building.  
 Idaho Falls, Idaho, 204 Federal Building.  
 Iowa City, Iowa, 508 Hydraulic Laboratory, University of Iowa.

Lincoln, Nebr., 1404 Statehouse.  
 Los Angeles, Calif., G-31 United States Post Office and Courthouse.  
 Oklahoma City, Okla., 303 Capitol Office Building.  
 Portland, Oreg., 606 Post Office Building.  
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines  
 and Metallurgy.  
 St. Louis, Mo., 926 New Federal Building.  
 Salt Lake City, Utah, 303 Federal Building.  
 San Francisco, Calif., 625 Market Street Building.  
 Santa Fe, N. Mex., 204 United States Courthouse.  
 Tacoma, Wash., 1100 Washington Building.  
 Topeka, Kans., 305 Federal Building.  
 Tucson, Ariz., 210 Post Office Building.

A list of the Geological Survey publications may be obtained by applying to the Director, Geological Survey, Washington, D. C.

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data in reports of the Geological Survey

(A = Annual Report; B = Bulletin; W = Water-Supply Paper)

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information...	1884 to Sept. 1890
12th A, pt. 2	....do.....	1884 to June 30, 1891.
13th A, pt. 3	....do.....	1884 to Dec. 31, 1892.
14th A, pt. 2	Monthly discharge (long-time records, 1871-93)..	1888 to Dec. 31, 1893.
B 131.....	Descriptions, measurements, gage heights, and ratings.	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).	1895.
W 11.....	Gage heights (also gage heights for earlier years).	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895-96.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights of streams west of the Mississippi River except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River and Missouri River and tributaries.	
W 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River except Missouri River and tributaries.	1896.
20th A, pt. 4	Monthly discharge (also for many earlier years).	1898.
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.....	1901.

Note.- Reports containing records for years after 1901 are given in table on page 6.

The table on the following page gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1941. The data for any particular station will, in general, be found in the reports covering the years during which the station was maintained. For example, the data for 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 403, 433, 453, 473, 503, which contain records for the Ohio River Basin for those years.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report, the streams and points of measurement listed appearing in the same relative order as the streams and gaging stations in the body of the report. An index of the records obtained prior to 1904 has been published in Water-Supply Paper 119.

Each of the reports on surface water supply for the year 1939, issued as Water-Supply Papers 871 to 884 (see table on p. 6), contains a summary of yearly discharge at gaging

Numbers of water-supply papers containing results of stream measurements, 1899-1941

(For basins included see p. 4)

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1899 a...	36	b35, 36	36	36	36	c36, 37	37	37	d37, 38	38, 39	38, 39	38	38	38
1900 g...	47, h48	48	48, 149	49	49	i50, 51	50	50	50	51	51	51	51	51
1901.....	56, 75	55, 75	55, 75	55, 75	55, 75	k55, 56, 75	56, 75	56, 75	56, 75	56, 75	56, 75	56, 75	56, 75	56, 75
1902.....	58, 83	58, 83	58, 83	58, 83	58, 83	l58, 83	84	84	84	85	85	85	85	85
1903.....	59, 87	59, 87	59, 87	59, 87	59, 87	m59, 87	88	88	88	89	89	89	89	89
1904.....	61, 62, 125	61, 62, 125	61, 62, 125	61, 62, 125	61, 62, 125	n61, 62, 125	126	126	126	127	127	127	127	127
1905.....	63, 64, 126	63, 64, 126	63, 64, 126	63, 64, 126	63, 64, 126	o63, 64, 126	127	127	127	128	128	128	128	128
1906.....	65, 127	65, 127	65, 127	65, 127	65, 127	p65, 127	128	128	128	129	129	129	129	129
1907-8.....	66, 128	66, 128	66, 128	66, 128	66, 128	q66, 128	129	129	129	130	130	130	130	130
1908.....	67, 129	67, 129	67, 129	67, 129	67, 129	r67, 129	130	130	130	131	131	131	131	131
1909.....	68, 130	68, 130	68, 130	68, 130	68, 130	s68, 130	131	131	131	132	132	132	132	132
1910.....	69, 131	69, 131	69, 131	69, 131	69, 131	t69, 131	132	132	132	133	133	133	133	133
1911.....	70, 132	70, 132	70, 132	70, 132	70, 132	u70, 132	133	133	133	134	134	134	134	134
1912.....	71, 133	71, 133	71, 133	71, 133	71, 133	v71, 133	134	134	134	135	135	135	135	135
1913.....	72, 134	72, 134	72, 134	72, 134	72, 134	w72, 134	135	135	135	136	136	136	136	136
1914.....	73, 135	73, 135	73, 135	73, 135	73, 135	x73, 135	136	136	136	137	137	137	137	137
1915.....	74, 136	74, 136	74, 136	74, 136	74, 136	y74, 136	137	137	137	138	138	138	138	138
1916.....	75, 137	75, 137	75, 137	75, 137	75, 137	z75, 137	138	138	138	139	139	139	139	139
1917.....	76, 138	76, 138	76, 138	76, 138	76, 138	aa76, 138	139	139	139	140	140	140	140	140
1918.....	77, 139	77, 139	77, 139	77, 139	77, 139	ab77, 139	140	140	140	141	141	141	141	141
1919-20.....	78, 140	78, 140	78, 140	78, 140	78, 140	ac78, 140	141	141	141	142	142	142	142	142
1921.....	79, 141	79, 141	79, 141	79, 141	79, 141	ad79, 141	142	142	142	143	143	143	143	143
1922.....	80, 142	80, 142	80, 142	80, 142	80, 142	ae80, 142	143	143	143	144	144	144	144	144
1923.....	81, 143	81, 143	81, 143	81, 143	81, 143	af81, 143	144	144	144	145	145	145	145	145
1924.....	82, 144	82, 144	82, 144	82, 144	82, 144	ag82, 144	145	145	145	146	146	146	146	146
1925.....	83, 145	83, 145	83, 145	83, 145	83, 145	ah83, 145	146	146	146	147	147	147	147	147
1926.....	84, 146	84, 146	84, 146	84, 146	84, 146	ai84, 146	147	147	147	148	148	148	148	148
1927.....	85, 147	85, 147	85, 147	85, 147	85, 147	aj85, 147	148	148	148	149	149	149	149	149
1928.....	86, 148	86, 148	86, 148	86, 148	86, 148	ak86, 148	149	149	149	150	150	150	150	150
1929.....	87, 149	87, 149	87, 149	87, 149	87, 149	al87, 149	150	150	150	151	151	151	151	151
1930.....	88, 150	88, 150	88, 150	88, 150	88, 150	am88, 150	151	151	151	152	152	152	152	152
1931.....	89, 151	89, 151	89, 151	89, 151	89, 151	an89, 151	152	152	152	153	153	153	153	153
1932.....	90, 152	90, 152	90, 152	90, 152	90, 152	ao90, 152	153	153	153	154	154	154	154	154
1933.....	91, 153	91, 153	91, 153	91, 153	91, 153	ap91, 153	154	154	154	155	155	155	155	155
1934.....	92, 154	92, 154	92, 154	92, 154	92, 154	aq92, 154	155	155	155	156	156	156	156	156
1935.....	93, 155	93, 155	93, 155	93, 155	93, 155	ar93, 155	156	156	156	157	157	157	157	157
1936.....	94, 156	94, 156	94, 156	94, 156	94, 156	as94, 156	157	157	157	158	158	158	158	158
1937.....	95, 157	95, 157	95, 157	95, 157	95, 157	at95, 157	158	158	158	159	159	159	159	159
1938.....	96, 158	96, 158	96, 158	96, 158	96, 158	au96, 158	159	159	159	160	160	160	160	160
1939.....	97, 159	97, 159	97, 159	97, 159	97, 159	av97, 159	160	160	160	161	161	161	161	161
1940.....	98, 160	98, 160	98, 160	98, 160	98, 160	aw98, 160	161	161	161	162	162	162	162	162
1941.....	99, 161	99, 161	99, 161	99, 161	99, 161	ax99, 161	162	162	162	163	163	163	163	163

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Tables of monthly discharge for 1899 in 21st Annual Report, part 4.  
b James River only.  
c Gallatin River.  
d Green and Gunnison Rivers and Colorado River above Gunnison River.  
e Mojave River only.  
f Kings and Kern Rivers and south Pacific slope basins.  
g Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, water, and stream discharge contained in Water-Supply Paper 52.  
h Monthly discharge for 1900 in 22d Annual Report, part 4.  
i Mississippian and Schuykill Rivers to James River.  
j Scioto River.  
k Loup, Platte, and Elkhorn Rivers and tributaries below Platte River.  
l Tributaries of Mississippi River from east.  
m Lake Ontario and tributaries to St. Lawrence River proper.  
n Hudson Bay only.  
o New England rivers only.  
p Hudson River to Delaware River, inclusive.  
q Susquehanna River to Yackin River, inclusive.  
r Platte and Kansas Rivers.  
s Pacific Great Basin in California, except Truckee and Carson River Basins.  
t Below mouth of Gila River.  
u Rogue, Umpqua, and Siletz Rivers only.

stations in the area covered by that report. Gaging stations at which 10 or more complete years of record have been collected are represented. These summaries are available also as separate reprints.

From time to time reports have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which have been revised), as well as some records not contained in the annual series of water-supply papers. The following table gives the numbers and titles of these reports, arranged in alphabetical order by States and drainage basins.

Reports containing compilation of discharge by States and drainage basins		
Water-Supply Paper	Year ending	State or drainage basin and title
STATE		
107	1903	Alabama, Water powers of, with an appendix on stream measurements in Mississippi.
298	1912	California, Water resources of, part 1, Stream measurements in Sacramento River Basin.
299	1912	California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.
300	1912	California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast river basins.
447	1918	California, southern, Surface water supply of Pacific slope of.
597-E	1927	California, Surface water supply of Sacramento River Basin.
636-D	1927	California, Surface water supply of San Joaquin River Basin.
636-E	1927	California, southern, Surface water supply of Pacific slope basins in.
637-A	1927	California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.
74	1900	Colorado, Water resources of.
197	1905	Georgia, Water resources of.
415	1915	Massachusetts, Surface waters of.
230	1906	Nebraska, Surface water supply of.
370	1910	Oregon, Surface water supply of.
860	1937	Texas, Summary of records of surface waters of.
424	1916	Vermont, Surface waters of.
492	1919	Washington, Summary of hydrometric data in.
870	1935	Washington, Summary of records of surface waters of.
469	1921	Wyoming, Surface waters of, and their utilization.
DRAINAGE BASIN		
595	1914	Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization.
617	1927	Colorado River, upper (Colo., Utah), and its utilization.
517	1920	Great Salt Lake Basin, Water powers of.
618	1926	Green River (Utah, Wyo.) and its utilization.
198	1906	Kennebec River Basin (Maine), Water resources of.
491	1917	Milk River. (See St. Mary and Milk Rivers.)
536	1920	New-Kanawha River Basin (N. C., Va., W. Va.), Surface Water Supply of.
279	1909	Penobscot River Basin (Maine), Water resources of.
192	1906	Potomac River Basin (D. C., Md., W. Va.)
368	1913	Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913.
491	1917	St. Mary and Milk Rivers (Mont., Canada), Water supply of.
109	1904	Susquehanna River Basin (Pa., Md.), Hydrography of.

Records of discharge have been published also in State reports. Some of these are not contained in the publications of the Geological Survey or are revisions of records previously published in its water-supply papers. The following table contains a list of these reports.

State reports containing compilation of records of discharge			
State	Year ending	Report	Issued by
Alabama.....	1915	Bull. 17, Water powers of Alabama....	Geological Survey of Alabama.
Arkansas.....	1926	Stream-gaging Report 1.....	Arkansas Geological Survey.
Connecticut.....	1926	Bull. 44, Water resources of Connecticut.	State Geological and Natural History Survey.
Do.....	1933 <sup>a</sup>	5th biennial report.....	Connecticut State Water Commission.
Georgia.....	1906	Bull. 16, Water powers of Georgia....	Geological Survey of Georgia.
Do.....	1920 <sup>b</sup>	Bull. 38, Water powers of Georgia....	Do.
Illinois.....	1911	Water resources of Illinois.....	Rivers and Lakes Commission.
Do.....	1934	Stream-flow data of Illinois.....	Division of Waterways.
Indiana.....	1927	Pub. 72, Surface water supply of Indiana.	Department of Conservation.
Do.....	1930 <sup>c</sup>	Pub. 112, Surface water supply of Indiana.	Do.
Iowa.....	1932	Stream-flow records of Iowa.....	Iowa State Planning Board.

<sup>a</sup> Includes records of monthly discharge in second-feet per square mile for years 1912-33.

<sup>b</sup> Includes records for years 1907-18.

<sup>c</sup> Includes records for years 1927-30.

## State reports containing compilation of records of discharge--Continued

State	Year ending	Report	Issued by
Kansas.....	1919	Surface waters of Kansas.....	Kansas Water Commission.
Do.....	1924 <sup>d</sup>	.....do.....	Do.
Do.....	1928 <sup>e</sup>	.....do.....	Kansas State Board of Agriculture.
Do.....	1935 <sup>f</sup>	Stream-flow data of Kansas.....	Do.
Do.....	1939 <sup>g</sup>	.....do.....	Do.
Kentucky....	1920	Surface waters of Kentucky.....	Kentucky Geological Survey.
Maryland....	1937	Flow data and draft storage curves for major streams in Maryland.	State Planning Commission and Water Resources Commission.
Minnesota...	1912	Water-resources investigation of Minnesota.	State Drainage Commission.
Missouri....	1926	Vol. 20, 2d series, Water resources of Missouri.	Missouri Geological Survey, and Water Resources.
Do.....	1939 <sup>h</sup>	Vol. 26, 2d series, Surface waters of Missouri.	Do.
Nebraska....	1914	1st hydrographic report.....	Bureau of Water Power, Irrigation, and Drainage.
Do.....	1928 <sup>i</sup>	2d hydrographic report.....	Do.
New Jersey...	1928	Bull. 33, Surface water supply of New Jersey.	Department of Conservation and Development.
Do.....	1934 <sup>j</sup>	Special Report 5, Surface water supply of New Jersey.	State Water Policy Commission.
New Mexico..	1925	Surface water supply of New Mexico...	Office of the State Engineer.
North Carolina.	1923	Bull. 34, Discharge records of North Carolina streams.	Department of Conservation and Development.
Do.....	1936 <sup>k</sup>	Bull. 39, Discharge records of North Carolina streams.	Do.
North Dakota	1920	Report to Governor of North Dakota on flood control.	State chief engineer.
Do.....	1927 <sup>l</sup>	Surface water in North Dakota.....	State Planning Board.
Ohio.....	1921 <sup>m</sup>	Bull. 73, Ohio stream flow.....	Engineering Experiment Station, Ohio State University.
Do.....	1939 <sup>n</sup>	Bull. 200, Compilation of stream-flow records of Ohio.	Department of Agriculture, Division of Conservation and Natural Resources.
Oregon.....	1914	Bull. 4, Water resources of the State of Oregon.	Office of the State Engineer.
Do.....	1924 <sup>o</sup>	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	1930 <sup>p</sup>	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	1936 <sup>q</sup>	Bull. 9, Water resources of the State of Oregon.	Do.
Pennsylvania	1911	Report of the Water Supply Commission of Pennsylvania.	Water Supply Commission of Pennsylvania.
Do.....	1932 <sup>r</sup>	Stream-flow records of Pennsylvania..	Department of Forests and Waters.
Tennessee...	1924	Bull. 34, Water resources of Tennessee.	Department of Education.
Do.....	1930 <sup>s</sup>	Bull. 40, Surface waters of Tennessee.	Do.
Utah.....	1905	5th biennial report, State Engineer..	Office of the State Engineer.
Do.....	1910	7th biennial report, State Engineer..	Do.
Do.....	1916	10th biennial report, State Engineer.	Do.
Virginia....	1927	Bull. 31, Water resources of Virginia.	Conservation Commission.
Washington...	1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.
Wisconsin...	1914	1st report of Railroad Commission of Wisconsin to Legislature on water powers.	Railroad Commission of Wisconsin.
Do.....	1923 <sup>t</sup>	2d report of Railroad Commission of Wisconsin to Legislature on water powers.	Do.

a Includes records of monthly discharge in second-feet per square mile for years 1912-33.

b Includes records for years 1907-18.

c Includes records for years 1927-30.

d Includes records for years 1919-24.

e Includes records for years 1924-28.

f Includes records for years 1928-35.

g Includes records for years 1935-39.

h Includes records for years 1927-39.

i Includes records for years 1914-28.

j Includes records for years 1928-34.

k Includes records for years 1889-1936; records of daily and monthly discharge are not included.

l Includes records for years 1882-1937.

m Includes all available records prior to 1921.

n Includes records for years 1902-39.

o Includes records for years 1914-24.

p Includes records for years 1924-30.

q Includes records for years 1930-36.

r Includes records for years 1928-32.

s Includes average weekly discharge for years 1920-30.

t Includes records for years 1914-23.

Note.- In addition to the records contained in the reports listed above, the following States have issued annual or biennial reports in which are contained records of discharge: California, Colorado, Connecticut, Idaho, Indiana, Missouri, Montana, Nebraska, New Mexico, New York (also New York City Board of Water Supply), North Dakota, Oregon, Pennsylvania, Nevada, Washington, and Wyoming.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier noteworthy floods. The list on the following page gives the numbers and titles of these reports.

Water-Supply Paper	Title
88	The Passaic flood of 1902.
92	The Passaic flood of 1903.
96	Destructive floods in the United States in 1903.
147	Destructive floods in the United States in 1904.
162	Destructive floods in the United States in 1905.
334	The Ohio Valley flood of March-April 1913.
426	Southern California floods of January 1916.
487	The Arkansas River flood of June 3-5, 1921.
488	The floods in central Texas in September 1921.
520-G	Some floods in the Rocky Mountain region.
636-C	The New England flood of November 1927.
771	Floods in the United States, magnitude and frequency.
773-E	The New York State flood of July 1935.
796-B	Flood on Republican and Kansas Rivers, May and June 1935.
796-C	Flood in La Canada Valley, Calif., January 1, 1934.
796-G	Major Texas floods of 1935.
798	The floods of March 1936, Part 1, New England Rivers.
799	The floods of March 1936, Part 2, Hudson River to Susquehanna River region.
800	The floods of March 1936, Part 3, Potomac, James, and upper Ohio Rivers.
816	Major Texas floods of 1936.
836-A	Stages and flood discharges of the Connecticut River at Hartford, Conn.
838	Floods of Ohio and Mississippi Rivers, January-February 1937.
842	Floods in Canadian and Pecos River Basins of New Mexico, May and June 1937.
843	Floods of December 1937 in northern California.
844	Floods of March 1938 in southern California.
847	Maximum discharges at stream-measurement stations through September 1938.
867	Hurricane floods of September 1938.
869	Flood of August 1935 in Muskingum River Basin, Ohio.

## RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the water year October 1940 to September 1941 by agencies other than the Geological Survey. The records for these stations are not contained in the publications of the Geological Survey except as noted.

Records of discharge collected by agencies other than the Geological Survey			
Stream	Location	Period	Collected by
American Falls Reservoir, inflow to.	Near American Falls, Idaho.....	1927-28, 1932-41.	Idaho Water District 36.
Antelope Reservoir...	Sec. 32, T. 30 S., R. 45 E., near Danner, Oreg.	1925-27, 1930, 1932-41.	Oregon State engineer.
Bully Creek.....	SW $\frac{1}{4}$ sec. 33, T. 18 S., R. 44 E., 5 miles southwest of Vale, Oreg. Prior to spring of 1937 in sec. 20, 6 miles west of Vale.	1933-41.....	Do.
Burnt River, South Fork of.	SW $\frac{1}{4}$ sec. 27, T. 13 S., R. 36 E., near Unity, Oreg.	1938-41.....	Do.
Grande Ronde River...	NW $\frac{1}{4}$ sec. 12, T. 3 S., R. 36 E., at lower reservoir site near La Grande, Oreg.	1937-41.....	Do.
Grassy Creek.....	Below Grassy Lake, near Moran, Wyo...	1941.....	Idaho Water District 36.
Indian Creek.....	SE $\frac{1}{4}$ sec. 35, T. 1 S., R. 40 E., above North Indian Creek, near Imbler, Oreg.	1938-41.....	Oregon State engineer.
Island Park Reservoir, inflow to.	Near Island Park, Idaho.....	1935-41.....	Idaho Water District 36.
Jack Creek.....	SE $\frac{1}{4}$ sec. 25, T. 30 S., R. 44 E., 35 miles southeast of Danner, Oreg.	1925, 1930, 1932-41.	Oregon State engineer.
Jordan Creek.....	9 miles west of Jordan Valley, Oreg...	1930, 1932-41...	Do.
Lapwai Creek.....	Near Sweetwater, Idaho.....	1940-41.....	Bureau of Reclamation.
Little Minam River...	SE $\frac{1}{4}$ sec. 27, T. 3 S., R. 41 E., 10 miles east of Cove, Oreg.	1938-41.....	Oregon State engineer.
Malheur River.....	Below Nevada Dam, near Vale, Oreg...	1934, 1936-41...	Do.
Do.....	SW $\frac{1}{4}$ sec. 32, T. 20 S., R. 41 E., near Ramoth, Oreg.	1931-41.....	Do.
Snake River tributaries.	Near Irwin, Idaho.....	1941.....	Idaho Water District 36.
Teton Basin, inflow to and diversions in.	Near Driggs, Idaho.....	1934-41.....	Do.
Wallowa Lake Reservoir	At outlet, near Joseph, Oreg.....	1925-41.....	Oregon State engineer.
Wallowa River.....	Below Wallowa Lake, Oreg.....	1926-41.....	Do.
Webb Creek.....	Near Sweetwater, Idaho.....	1940-41.....	Bureau of Reclamation.

† Records for some earlier years published in water-supply papers of the Geological Survey.

Note. - Of the records for the stations operated by the Oregon State engineer, those for 1925-30 are published in Bulletin 8 of the State engineer, and those for 1931-36 (including some to December 1936) in Bulletin 9; those for 1937-41 have not been published.

Records for the stations operated by Idaho Water District 36 are published in the annual reports of that organization.

The Soil Conservation Service began in 1938 to make studies of run-off from two areas of less than 220 acres each in the vicinity of Emmett, Idaho, and from two areas of less than 180 acres each in the vicinity of Moscow, Idaho. The records are in the files of that organization.

The work in the several States was done under cooperative agreements with the organizations listed below.

Idaho: Department of Reclamation, James Spofford and E. V. Berg, commissioners.

Oregon: Office of the State engineer, Charles E. Stricklin.

Washington: State Department of Conservation and Development, John Brooke Fink and Ed. Davis, directors, and C. J. Bartholet, supervisor of hydraulics.

Wyoming: Office of the State engineer, L. C. Bishop.

Funds were furnished by the Corps of Engineers, United States Army, for the construction and maintenance of two gaging stations in Idaho.

Financial assistance was also furnished by the Office of Indian Affairs and the Bureau of Reclamation of the United States Department of the Interior; the Flood Control Coordinating Committee, the Soil Conservation Service, and the Forest Service of the United States Department of Agriculture; the Federal Power Commission; and the Weather Bureau of the United States Department of Commerce.

Assistance in collecting records was rendered also by the following municipality, counties, organizations, corporations, and individuals:

Idaho: City of Pocatello, Idaho Power Co., Lake Irrigation District, Washington Water Power Co., Board of Control for Boise Project, Bradley Mining Co., Western States Utilities Co., Idaho Water District 36, North Side Canal Co., Twin Falls Canal Co., Jackson Hole Light and Power Co., Utah Power & Light Co., and water-masters for Big Lost, Little Lost, Big Wood, Little Wood, Boise, Lake Fork of Payette, and Weiser Rivers and Mud Lake.

Oregon: Warmsprings Irrigation District; Malheur, Baker, Union, and Wallowa Counties; Eastern Oregon Light & Power Co.; Inland Power & Light Co., and the Grazing Service of the United States Department of the Interior.

Washington: Washington Water Power Co.

#### DIVISION OF WORK

The stream-gaging work was conducted by the water resources branch of the Geological Survey, Glenn L. Parker, chief hydraulic engineer, Carl G. Paulsen, assistant chief hydraulic engineer, and Rudolph G. Kasel, chief of the division of surface waters. The data for the stations in the several States were collected and prepared for publication under supervision of district engineers as follows: In Idaho (for Snake River at and above Milner, and for stations on tributaries that enter Snake River above American Falls reservoir), Lynn Crandall; for all other stations in Idaho, for stations in Salmon Falls Creek Basin in Nevada, and for Snake River at Oxbow, Oreg., T. R. Newell; in Oregon, (except for the Snake River at Oxbow), G. H. Canfield, the work being done in collaboration with C. E. Stricklin, State engineer; in Washington, F. M. Veatch; in Wyoming, Robert Follansbee; and in Nevada, (except for the stations in the Salmon Falls Creek Basin), A. B. Purton.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, engineer in charge, and M. C. Boyer, associate engineer, section of reports.



## SNAKE RIVER MAIN STEM

Jackson Lake at Moran, Wyo.

Location.- Electric tape gage, lat. 43°51', long. 110°35', in sec. 18, T. 45 N., R. 114 W., at dam on Snake River at Moran. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to June 1, 1940, staff gage short distance upstream from dam at same datum.

Drainage area.- 816 square miles.

Records available.- July 1908 to September 1941 (1908-10, fragmentary).

Extremes.- Maximum contents during year, 679,200 acre-feet June 26 (elevation, 6,762.27 feet); minimum, 167,320 acre-feet Oct. 1 (elevation, 6,739.22 feet).

1908-41: Maximum contents, 857,220 acre-feet June 23, 1937 (elevation, 6,769.40 feet); no usable contents on several days in period August to October 1919 (elevation, 6,730.00 feet).

Remarks.- Reservoir was formed in 1906 by log crib dam with a usable capacity of 300,000 acre-feet. This dam was washed out in July 1910 and replaced by an earth dam, forming a reservoir with a usable capacity of 380,000 acre-feet. The earth dam was raised in 1916 increasing the usable capacity to 790,000 acre-feet. In 1917, by dredging the outlet, the capacity was further increased to 847,000 acre-feet between elevations 6,730 feet (top of baffles in sluices) and 6,769 feet (top of spillway gates) above mean sea level. Water is used for irrigation in Snake River Valley, Idaho. Gage read once daily at 7 a.m. during irrigation season and at 8 a.m. during rest of year. Contents as given herein are computed from elevation at those times; all available for release.

Cooperation.- Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	167,320	192,630	214,800	237,120	262,470	284,660	300,990	335,370	550,620	666,080	441,000	295,270
2	168,860	194,010	215,400	237,630	263,090	285,090	301,540	338,620	556,720	661,960	431,060	290,390
3	169,860	194,800	215,800	238,140	263,710	285,300	302,480	343,180	562,380	661,000	420,670	284,660
4	170,850	195,990	216,000	238,550	264,130	285,720	303,530	347,520	567,560	662,930	410,560	277,350
5	172,000	196,780	216,400	239,570	264,760	286,150	304,180	353,420	572,270	662,210	400,730	269,370
6	172,590	197,580	216,810	240,590	265,390	286,780	305,240	357,590	578,410	666,400	390,680	261,640
7	173,580	198,370	217,210	241,400	266,020	287,210	306,090	360,440	583,870	669,130	381,160	255,440
8	174,340	199,360	217,610	241,810	266,650	287,630	306,730	365,710	590,960	671,810	372,300	250,270
9	174,920	200,550	218,010	242,420	267,900	288,270	307,380	369,430	596,440	673,250	364,610	245,720
10	175,700	201,140	218,410	244,280	268,950	288,900	308,240	373,410	602,660	674,120	358,910	242,830
11	176,480	201,740	218,820	245,100	270,000	289,330	308,880	377,840	607,640	674,660	352,550	239,570
12	177,260	202,130	219,020	245,930	271,250	289,540	309,740	383,380	612,890	675,480	351,670	235,490
13	178,040	202,330	219,420	246,960	271,880	289,980	310,810	388,470	618,140	677,160	352,330	232,840
14	178,630	202,730	219,820	248,000	272,720	290,600	311,670	403,630	622,200	687,660	352,330	230,590
15	179,410	202,930	220,220	249,240	273,140	291,030	312,530	414,610	626,200	679,360	352,110	228,550
16	180,190	203,130	220,620	250,270	273,550	291,450	313,610	422,030	635,900	670,860	352,550	227,130
17	180,970	203,940	221,030	251,100	273,770	291,870	316,750	427,210	641,430	660,960	351,670	225,290
18	181,360	204,340	221,430	251,930	275,020	292,510	316,820	433,980	650,340	650,150	350,140	223,860
19	181,750	205,350	223,450	252,750	275,650	292,930	317,460	440,090	656,880	659,620	349,700	223,250
20	182,140	205,960	224,470	253,580	276,280	293,780	318,110	445,770	662,450	650,020	349,700	222,030
21	182,520	206,760	225,290	253,990	276,910	294,210	318,970	451,460	668,990	650,490	348,600	219,820
22	182,920	207,360	225,700	254,820	277,960	294,630	319,610	458,050	671,170	652,590	342,960	217,610
23	183,520	207,960	226,310	256,060	278,790	295,690	320,470	464,660	672,660	650,400	336,020	216,000
24	184,110	208,560	226,550	256,480	279,630	296,330	321,750	473,840	675,300	649,620	330,160	215,800
25	184,900	209,170	226,570	257,100	280,890	296,750	322,630	484,390	677,980	647,160	323,690	217,210
26	185,690	209,770	230,590	258,130	281,730	297,180	324,330	496,390	679,200	647,120	318,750	219,820
27	187,080	210,770	231,620	259,160	282,560	297,810	326,050	508,410	678,230	647,470	314,670	221,830
28	188,660	211,580	233,960	259,990	282,980	298,450	327,550	516,670	673,840	646,810	312,100	223,250
29	189,650	212,780	234,670	260,610	-	299,080	329,720	527,470	670,680	645,640	308,020	224,470
30	190,450	214,390	235,280	261,230	-	299,720	332,110	535,870	668,260	644,420	303,750	226,110
31	191,240	-	236,100	261,850	-	300,360	-	543,130	-	648,960	299,510	-

Monthly elevation and contents, water year October 1940 to September 1941

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	6,739.17	166,350	-
Oct. 31.....	6,740.44	191,240	+24,890
Nov. 30.....	6,741.60	214,590	+23,150
Dec. 31.....	6,742.67	236,100	+21,710
Calendar year 1940.....	-	-	-128,730
Jan. 31.....	6,743.92	261,850	+25,750
Feb. 28.....	6,744.93	282,980	+21,130
Mar. 31.....	6,745.75	300,360	+17,380
Apr. 30.....	6,747.23	332,110	+31,750
May 31.....	6,756.57	543,130	+211,020
June 30.....	6,761.92	668,260	+125,130
July 31.....	6,752.49	448,960	-219,300
Aug. 31.....	6,745.91	299,510	-149,450
Sept. 30.....	6,742.18	226,110	-73,400
Water year 1940-41.....	-	-	+59,760

## SNAKE RIVER MAIN STEM

Snake River at Moran, Wyo.

Location.- Water-stage recorder, lat.  $43^{\circ}51'$ , long.  $110^{\circ}35'$ , in sec. 18, T. 45 N., R. 114 W., at Moran, 1,000 feet downstream from Jackson Lake Dam. Datum of gage is 6,725.61 feet above mean sea level (Bureau of Reclamation bench mark).

Drainage area.- 816 square miles.

Records available.- September 1903 to September 1941.

Average discharge.- 38 years, 1,414 second-feet (unadjusted).

Extremes.- Maximum discharge during year, 6,800 second-feet July 18 (gage height, 8.37 feet); minimum, 12 second-feet May 10-13 (gage height, 1.12 feet).

1903-41: Maximum discharge, 15,100 second-feet June 12, 1918 (gage height, 10.41 feet, site and datum then in use); practically no flow for a few days in 1907 and 1909.

Remarks.- Records excellent except those for periods when gates at dam were closed, which are fair. Flow regulated by Jackson Lake (see p. 11).

Cooperation.- Gage-height record and results of two discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	21	21	18	18	18	19	19	20	3,180	6,020	3,020
2	24	21	21	18	18	18	19	19	209	2,960	6,280	3,330
3	21	21	21	18	18	18	19	18	865	284	6,060	4,300
4	21	21	21	18	18	18	19	18	1,670	1,310	6,020	4,890
5	21	21	21	17	17	18	19	17	1,470	3,870	5,750	4,540
6	21	21	21	17	17	18	19	16	959	5,280	5,560	4,200
7	21	21	21	17	17	18	19	15	308	5,750	5,450	3,760
8	21	21	21	18	17	18	20	14	26	5,780	5,420	3,010
9	21	21	21	18	17	18	20	13	25	6,110	5,210	2,490
10	21	21	21	16	17	18	20	12	24	6,090	4,810	2,530
11	21	21	21	18	17	18	20	12	24	6,120	3,580	2,610
12	21	21	21	18	17	18	20	12	300	5,920	1,240	2,420
13	21	21	21	18	17	18	20	12	1,210	5,770	868	1,900
14	21	21	21	18	18	18	20	19	1,280	5,730	854	1,890
15	21	21	21	18	18	18	20	20	422	5,700	854	1,880
16	21	21	20	18	18	18	20	21	24	5,940	963	1,860
17	21	21	20	18	18	18	20	312	21	6,580	1,340	1,670
18	21	21	20	18	18	18	20	1,080	20	6,720	1,340	1,470
19	21	21	20	18	17	18	20	929	18	6,670	1,340	1,760
20	21	21	19	18	17	18	20	558	198	6,510	1,460	2,180
21	21	21	19	18	17	18	20	552	1,390	5,650	2,890	1,940
22	21	21	18	17	17	18	20	1,400	1,900	5,130	4,050	1,740
23	21	21	18	17	17	18	20	1,260	1,480	5,510	4,030	1,060
24	21	21	18	17	17	18	20	520	1,100	5,400	4,020	242
25	21	21	18	17	17	18	20	223	1,040	5,480	3,820	22
26	21	21	18	17	17	18	20	32	1,970	4,990	3,430	19
27	21	21	18	17	17	18	20	24	3,300	4,600	2,880	18
28	21	21	18	17	17	18	20	24	3,980	4,050	2,550	18
29	21	21	18	18	-	18	20	24	3,010	3,010	2,710	16
30	21	21	18	18	-	18	20	24	2,400	3,400	3,160	18
31	21	-	18	18	-	18	-	21	-	4,140	3,070	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	657	24	21	21.2	1,300
November.....	630	21	21	21.0	1,250
December.....	613	21	18	19.8	1,220
Calendar year 1940.....	474,203	8,110	18	1,296	940,600
January.....	548	18	17	17.7	1,090
February.....	485	18	17	17.3	952
March.....	558	18	19	18.0	1,110
April.....	593	20	19	19.8	1,180
May.....	7,240	1,400	12	234	14,360
June.....	30,661	3,980	18	1,022	60,820
July.....	155,214	6,720	284	4,942	305,900
August.....	107,059	6,280	854	3,454	212,300
September.....	60,805	4,890	18	2,027	120,600
Water year 1940-41.....	363,063	6,720	12	995	720,100

Note.- Stage-discharge relation affected by ice Dec. 15 to Apr. 5. Gates at dam closed Oct. 1 to May 16, May 26 to June 1, June 8-11, 16-19, Sept. 25-30.

## Snake River at Calamity Point, near Irwin, Idaho

Location.- Water-stage recorder, lat. 43°19'35", long. 111°11'40", in SW $\frac{1}{4}$  sec. 16, T. 1 S., R. 45 E., 400 feet upstream from Bear Creek, 5,600 feet upstream from Calamity Point dam site, and  $\frac{7}{8}$  miles southeast of Irwin. Altitude of gage, 5,387 feet (from river profile map).

Drainage area.- 5,110 square miles.

Records available.- April 1934 to October 1936, April 1939 to September 1941 (discontinued).

Extremes.- Maximum discharge during year, 13,600 second-feet May 27 (gage height, 5.25 feet); minimum daily, 1,520 second-feet Jan. 3, Mar. 15.  
1934-36, 1939-41: Maximum discharge, 27,500 second-feet June 1, 1936 (gage height, 8.65 feet); minimum daily, that for Jan. 3, 1941.

Remarks.- Records good. Flow partly regulated by Jackson Lake (see p. 11). Many small diversions from tributaries above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,510	2,230	1,900	1,650	bl,530	1,630	2,660	5,500	8,800	8,430	7,400	5,840
2	2,400	2,800	1,900	1,560	bl,530	1,680	2,790	5,810	8,250	9,230	8,980	5,790
3	2,470	2,280	1,900	bl,520	bl,530	1,660	2,860	6,490	8,040	8,610	as,980	5,100
4	2,490	2,230	1,900	bl,530	bl,540	1,640	2,790	6,920	9,140	6,050	as,800	7,090
5	2,560	2,140	1,870	bl,710	1,560	1,640	3,050	6,920	10,700	6,730	as,700	7,660
6	2,320	2,140	1,890	bl,900	1,640	1,640	3,110	6,480	10,900	9,040	as,600	7,320
7	2,280	2,180	1,870	bl,840	1,620	1,620	2,860	5,710	9,970	10,200	as,500	7,150
8	2,280	2,220	1,840	bl,750	1,620	1,600	2,770	5,690	9,740	10,900	as,400	6,780
9	2,410	2,200	1,840	bl,690	1,620	1,630	2,770	6,070	9,490	10,900	as,600	5,990
10	2,500	2,170	1,780	bl,780	*1,640	1,620	2,840	6,480	9,680	10,800	5,560	5,580
11	2,240	2,110	1,780	bl,750	1,640	1,600	2,840	7,180	8,980	10,600	8,400	5,500
12	2,200	2,000	1,800	bl,680	1,600	1,570	2,860	8,480	8,490	10,600	7,750	5,500
13	2,170	d1,940	1,740	bl,630	1,570	a1,550	2,960	10,200	8,920	10,200	5,710	5,230
14	2,160	d2,000	1,750	bl,760	1,550	a1,540	2,980	11,300	10,600	9,840	4,750	4,770
16	2,140	d1,970	1,570	1,930	1,560	1,520	2,980	10,400	11,500	9,810	4,470	4,790
16	2,110	d1,960	1,570	1,890	1,560	1,580	3,070	9,040	11,300	9,580	4,400	4,840
17	2,100	d1,970	1,740	1,760	1,570	1,630	3,040	8,520	11,400	9,550	4,520	4,720
18	2,080	d1,980	1,870	1,700	1,590	1,650	2,840	9,620	11,600	10,100	4,960	4,610
19	2,070	2,000	*1,820	1,700	1,620	1,760	2,740	10,600	11,400	10,100	4,840	4,540
20	2,050	*1,900	1,760	1,730	1,620	1,830	2,670	9,390	10,300	10,200	4,790	4,630
21	2,050	1,900	1,780	1,700	1,620	1,810	2,670	8,640	10,100	9,910	4,870	5,030
22	2,040	1,940	1,750	1,700	1,640	2,030	2,760	9,350	11,100	8,980	6,100	4,820
23	2,030	1,900	1,750	1,710	1,660	2,070	2,960	11,200	11,400	8,490	7,000	4,650
24	*2,010	1,830	1,790	*1,690	1,660	2,040	3,260	12,000	11,000	8,670	7,050	4,160
26	2,010	1,910	1,760	1,660	1,640	2,000	3,590	11,700	10,800	8,770	7,010	3,560
26	2,030	1,560	1,750	1,680	1,590	2,030	3,780	11,800	9,420	9,010	6,780	3,130
27	2,220	1,830	1,780	1,650	1,560	2,140	3,920	12,800	9,420	8,670	6,400	3,170
28	2,360	1,910	1,760	1,590	1,570	2,230	4,310	12,600	10,200	8,220	5,840	3,130
29	2,280	1,970	1,750	1,550	-	2,360	4,380	10,900	10,700	7,460	5,480	3,070
30	2,220	2,030	1,740	1,560	-	2,460	5,200	9,740	9,590	6,420	5,580	2,980
31	2,200	-	1,760	1,550	-	2,570	-	9,110	-	6,640	5,970	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	68,590					2,510	2,010	2,213	136,000			
November.....	60,900					2,280	1,830	2,030	120,800			
December.....	55,410					1,900	1,570	1,787	109,900			
Calendar year 1940.....	1,595,620					12,900	1,560	4,360	3,165,000			
January.....	52,500					1,930	1,520	1,694	104,100			
February.....	44,650					1,660	1,530	1,595	88,560			
March.....	56,460					2,570	1,520	1,821	112,000			
April.....	94,750					5,200	2,660	3,158	187,900			
May.....	276,450					12,800	5,500	8,519	548,400			
June.....	302,130					11,600	8,040	10,070	599,300			
July.....	282,550					10,900	6,050	9,115	560,400			
August.....	208,250					8,950	4,400	6,719	413,100			
September.....	152,180					7,660	2,950	5,073	301,800			
Water year 1940-41.....	1,654,880					12,800	1,520	4,534	3,282,000			

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for station near Heise.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of records for station near Heise.

## Snake River near Heise, Idaho

Location.- Water-stage recorder, lat. 43°37', long. 111°40', in sec. 5, T. 3 N., R. 41 E., 3 miles upstream from Heise and 23 miles upstream from Henrys Fork. Altitude of gage, 5,015 feet (revised, from river profile map).

Drainage area.- 5,740 square miles.

Records available.- September 1910 to September 1941, except for winters of 1914-24.

Average discharge.- 31 years, 6,710 second-feet (unadjusted).

Extremes.- Maximum discharge during year, 14,500 second-feet May 28 (gage height, 6.08 feet); minimum, 1,630 second-feet Jan. 4 (gage height, 1.55 feet).  
1910-41: Maximum discharge, 60,000 second-feet May 19, 1927, result of washing out of a landslide on Gros Ventre River (gage height, about 18.0 feet, present datum); minimum, 1,210 second-feet Jan. 22, 1935 (gage height, 1.15 feet).

Remarks.- Records excellent except those for periods of ice effect, which are good. Station is above all irrigation diversions from main river except Riley ditch (capacity, about 30 second-feet), which diverts 1 mile above station. About 105,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station. Flow partly regulated by Jackson Lake (see p. 11).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,940	2,540	2,270	b1,950	1,790	1,970	3,080	6,520	9,850	9,260	7,380	6,580
2	2,850	2,570	2,200	b1,850	b1,800	2,060	3,270	6,880	9,260	9,320	9,120	6,400
3	2,810	2,570	2,220	b1,770	b1,820	2,070	3,310	7,450	8,770	10,200	9,460	6,580
4	2,890	2,590	2,220	1,770	b1,890	2,030	3,230	8,000	9,500	7,040	9,290	7,100
5	2,780	2,510	2,220	2,030	b1,890	2,000	3,370	8,070	11,000	6,700	9,260	8,100
6	2,670	2,460	2,200	2,190	b1,900	2,010	3,590	7,740	11,800	8,980	9,120	7,930
7	2,620	2,500	2,190	2,120	b1,900	2,000	3,370	7,010	10,900	10,400	8,940	7,740
8	2,600	2,520	2,160	2,060	1,970	1,970	3,200	6,820	10,500	11,200	8,740	7,490
9	2,670	2,520	2,150	1,980	2,010	1,970	3,160	7,320	10,100	11,300	9,290	6,880
10	2,670	2,510	2,100	2,070	*2,020	1,960	3,210	7,670	10,300	11,300	9,290	6,080
11	2,590	2,450	b2,010	2,050	2,010	1,910	3,270	8,300	9,850	11,000	8,840	5,970
12	2,540	2,360	*b2,000	1,960	2,030	1,850	3,250	9,400	9,120	11,200	9,150	5,920
13	2,510	2,240	b1,960	1,920	1,960	1,840	3,390	11,000	9,220	10,800	5,850	5,890
14	2,480	2,230	b1,960	2,050	1,910	1,840	3,450	12,100	10,700	10,400	5,690	5,260
15	2,450	2,360	b1,910	2,290	1,880	1,830	3,410	11,600	12,100	10,400	5,180	5,080
16	2,450	2,220	b1,960	2,220	1,890	1,840	3,530	10,100	12,100	10,200	5,100	5,180
17	2,440	2,240	b2,100	2,020	1,890	2,000	3,590	9,600	11,900	10,000	5,080	5,080
18	2,420	2,270	b2,230	1,960	1,850	2,150	3,370	10,200	12,100	10,500	5,610	5,050
19	2,410	2,310	b2,160	1,970	1,900	2,280	3,180	11,700	12,000	10,600	5,640	4,900
20	2,390	*2,270	2,050	1,970	1,920	2,390	3,060	10,300	11,200	10,800	5,500	4,820
21	2,360	2,250	2,000	1,960	1,910	2,420	3,050	9,640	10,600	10,400	5,550	5,360
22	2,350	2,280	1,970	1,940	1,910	2,460	3,080	9,930	11,200	9,850	6,000	5,210
23	2,350	2,230	2,010	1,960	1,970	2,560	3,290	11,400	12,100	9,120	7,930	5,180
24	2,340	2,230	2,050	1,960	2,000	2,520	3,650	13,100	11,700	9,260	7,930	4,780
25	2,340	2,200	2,050	1,940	2,010	2,480	4,050	12,600	11,000	9,290	7,870	4,180
26	2,340	2,240	2,030	1,960	1,960	2,510	4,380	12,900	9,890	9,680	7,770	3,670
27	2,410	2,160	2,030	1,910	1,890	2,600	4,630	13,500	9,930	9,500	7,490	3,530
28	2,710	2,200	2,020	1,840	1,890	2,740	5,020	14,000	10,300	8,840	7,040	3,550
29	2,600	2,270	1,950	1,860	-	2,900	5,610	12,300	11,400	8,500	6,370	3,450
30	2,570	2,320	1,970	1,850	-	2,890	6,110	11,000	10,500	7,100	6,260	3,390
31	2,520	-	*2,020	1,850	-	3,010	-	10,300	-	7,160	6,700	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							79,060	2,940	2,340	2,550	156,800	
November.....							70,620	2,590	2,160	2,354	140,100	
December.....							64,370	2,270	1,910	2,076	127,700	
Calendar year 1940.....							1,781,360	13,300	1,810	4,867	3,533,000	
January.....							61,240	2,290	1,770	1,975	121,500	
February.....							53,760	2,030	1,790	1,920	106,600	
March.....							69,160	3,010	1,830	2,231	137,200	
April.....							109,140	6,110	3,050	3,638	216,500	
May.....							308,450	14,000	6,520	9,950	611,800	
June.....							320,890	12,100	8,770	10,700	636,500	
July.....							300,300	11,200	6,700	9,687	595,600	
August.....							229,430	9,460	3,080	7,401	455,100	
September.....							166,320	8,100	3,390	5,544	329,900	
Water year 1940-41.....							1,832,740	14,000	1,770	5,021	3,635,000	

\* Winter discharge measurement made on this day.  
b Stage-discharge relation affected by ice.

## Diversions from Snake River between Heise and Shelley gaging stations, Idaho

Between Heise and Shelley gaging stations, 47 canals divert water from Snake River for irrigation; of these 36 divert above mouth of Henrys Fork. Records available during each irrigation season from 1919 to 1941. One of the canals is equipped with a water-stage recorder, the others with staff gages, which are read once daily; records of discharge are combined to show total diverted flow.

Records good except those for May 1-17, which are fair.

Diversions, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,090	5,060	7,430	6,890	6,050
2								1,120	5,240	7,500	6,820	5,890
3								1,280	5,220	7,250	6,880	6,020
4								1,310	6,320	6,460	7,390	6,120
5								1,190	6,580	6,480	7,510	6,090
6								1,310	6,780	6,760	7,400	6,230
7								1,460	6,710	7,670	7,520	5,980
8								1,850	5,570	8,070	7,050	5,900
9								2,010	5,540	8,490	6,580	5,910
10								2,540	5,660	8,530	6,140	5,750
11								2,570	5,580	8,520	6,260	5,980
12								3,640	6,290	8,160	5,300	6,040
13								4,800	6,820	8,320	4,780	6,170
14								5,710	7,530	8,370	4,440	5,980
15								6,040	7,710	8,560	4,180	5,800
16								6,370	7,800	8,280	4,260	5,860
17								7,080	8,100	8,270	4,250	5,780
18								7,030	8,340	8,300	4,490	5,680
19								7,010	8,470	8,510	4,910	5,660
20								7,050	8,420	8,200	5,390	5,480
21								7,350	8,160	8,080	5,530	5,270
22								7,690	8,100	7,890	5,390	5,130
23								7,870	8,190	7,780	5,610	5,140
24								8,040	8,240	7,540	5,790	4,570
25								7,650	8,230	7,630	4,770	4,870
26								6,760	8,080	7,030	5,760	3,900
27								5,390	8,070	7,060	5,690	3,740
28								5,140	8,080	7,060	5,790	3,660
29								5,170	7,850	7,460	5,800	3,600
30								5,290	7,500	7,220	5,940	3,600
31								5,210	-	6,760	5,950	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						-	-	-	-	-		
May.....						143,970	6,040	1,090	4,644	285,600		
June.....						214,220	8,470	5,060	7,141	454,900		
July.....						239,220	8,530	6,460	7,717	474,500		
August.....						181,580	7,520	4,180	5,857	360,200		
September.....						161,820	6,230	3,600	5,394	321,000		
The period.....						-	-	-	-	1,866,200		

## SNAKE RIVER MAIN STEM

## Snake River near Shelley, Idaho

Location.— Water-stage recorder, lat. 43°25', long. 112°08', in sec. 17, T. 1 N., R. 37 E., a quarter of a mile east of Woodville and 3 miles north of Shelley. Altitude of gage, 4,596 feet (from river profile map).

Records available.— March 1915 to September 1941 (summer months only during some years).

Extremes.— Maximum discharge during year, 12,000 second-feet May 28 (gage height, 8.63 feet); minimum, 840 second-feet Jan. 5 (gage height, 3.90 feet).

1915-41: Maximum discharge, 47,200 second-feet June 17, 1918 (gage height, 16.97 feet); minimum, 268 second-feet Nov. 5, 1934 (gage height, 2.22 feet).

Greatest discharge known, 70,000 second-feet (estimated) June 6, 1894, at former station at Eagle Rock (now Idaho Falls), 7 miles upstream from present site.

Remarks.— Records excellent except those for periods of ice effect and no gage-height record, which are fair. Flow partly regulated by Jackson Lake (see p. 11), Henrys Lake (see p. 49), Island Park Reservoir (see p. 41), and Grassy Lake (see p. 49). Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,710	a2,860	2,590	b2,200	b1,600	2,360	4,020	6,500	8,070	5,150	2,080	2,680
2	2,910	a2,760	2,350	b2,050	b1,530	2,530	4,040	6,930	7,500	4,190	2,150	2,580
3	2,940	2,710	2,290	b1,620	b1,530	2,820	3,970	7,360	6,500	4,220	3,350	2,350
4	2,910	2,700	2,530	b1,300	b1,600	3,020	3,970	7,900	5,060	4,390	3,440	2,400
5	2,910	2,700	2,240	1,140	b1,670	2,870	4,000	8,580	5,030	2,700	3,230	2,780
6	2,850	2,640	2,240	1,410	b1,740	2,710	4,020	8,560	6,270	2,230	3,250	3,590
7	2,750	2,550	2,200	2,200	b1,900	2,560	4,220	7,970	7,390	3,500	3,190	3,570
8	2,640	2,610	2,150	a2,300	1,840	2,480	3,920	7,030	7,870	4,080	2,980	3,570
9	2,560	2,700	2,160	b2,400	2,010	2,500	3,620	6,670	8,350	4,260	3,070	3,440
10	2,530	2,820	2,100	b2,350	1,940	2,400	3,500	7,030	8,140	4,060	4,420	3,170
11	2,550	2,870	a2,050	b2,200	a2,290	2,400	3,550	7,000	8,240	3,970	4,950	2,630
12	2,510	a2,850	1,820	b2,100	a2,500	2,270	3,570	6,960	7,000	3,940	5,480	2,360
13	2,440	2,730	b1,530	b1,950	2,510	2,190	3,580	6,900	5,300	3,990	6,050	2,170
14	2,420	2,680	b1,450	1,780	b2,300	2,100	3,620	7,430	4,320	3,750	4,450	2,050
15	2,360	2,850	b1,410	1,700	b2,150	2,130	3,580	7,970	4,950	3,440	3,940	1,890
16	2,270	2,850	b1,400	1,790	2,170	2,080	3,660	7,460	5,990	3,250	5,530	1,730
17	2,240	2,640	b1,420	b2,040	b2,110	2,100	3,800	5,670	5,760	3,060	3,190	1,840
18	2,230	2,590	b1,520	a2,180	b2,120	2,200	3,920	4,260	5,450	3,070	2,920	1,850
19	2,230	2,400	1,580	b2,180	2,130	2,500	3,620	4,690	5,390	3,440	2,890	1,760
20	2,160	2,510	2,170	b2,180	2,190	2,940	3,530	5,700	5,390	3,800	2,870	1,810
21	2,150	2,340	2,450	b2,180	2,300	3,170	3,190	4,320	4,890	4,260	2,440	1,900
22	2,100	2,340	2,630	b2,180	2,330	3,210	3,110	3,070	4,370	4,260	2,270	2,230
23	2,130	2,510	2,830	2,190	a2,450	3,110	3,090	2,750	4,800	3,970	2,480	2,400
24	2,100	2,300	2,200	2,260	2,440	3,170	3,190	4,020	5,210	3,530	3,550	2,640
25	2,030	2,200	2,220	2,230	2,500	3,170	3,500	5,610	4,890	3,500	3,710	2,750
26	2,020	2,250	2,610	2,260	2,580	3,070	3,760	6,540	4,260	3,640	3,850	2,640
27	a2,010	2,300	2,520	b2,270	2,510	3,150	4,190	8,210	3,620	4,260	3,800	2,470
28	a2,340	2,230	2,780	b2,100	2,390	3,230	4,630	10,400	3,680	4,220	3,710	2,300
29	a2,790	2,260	2,940	b1,980	-	3,480	5,180	11,500	4,450	3,620	3,270	2,380
30	a2,790	2,340	2,240	b1,850	-	3,590	5,950	10,200	5,700	2,920	2,750	2,270
31	a2,920	-	2,320	b1,750	-	3,850	-	8,760	-	2,300	2,610	-
Month	Second-foot-days					Maximum		Minimum		Mean		Run-off in acre-feet
October.....	76,460					2,940		2,010		2,466		151,700
November.....	77,050					2,870		2,200		2,568		152,800
December.....	66,750					2,940		1,400		2,121		130,400
Calendar year.....	-					-		-		-		-
January.....	62,500					2,400		1,140		2,010		123,600
February.....	59,240					2,580		1,530		2,116		117,500
March.....	35,560					3,850		2,080		2,764		159,300
April.....	115,390					5,950		3,080		3,846		228,900
May.....	213,890					11,500		2,750		6,900		424,200
June.....	175,840					8,350		3,620		5,795		344,800
July.....	114,980					5,150		2,230		3,709		228,100
August.....	105,870					6,050		2,080		3,415		210,000
September.....	74,170					3,590		1,730		2,472		147,100
Water year 1940-41.....	1,224,300					11,500		1,140		3,354		2,428,000

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for station at Clough ranch.

b Stage-discharge relation affected by ice.

Diversions from Snake River between Shelley and Clough Ranch gaging station, Idaho

Between Shelley and Clough Ranch, 13 canals divert water from Snake River for irrigation. Records available during each irrigation season from 1919 to 1941. The two largest canals are equipped with recorders, the others with staff gages, which are read once daily. Records of discharge are combined to show total diverted flow.

Records good except those for May 1-17, which are fair.

Diversions, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								778	2,210	3,400	1,510	2,330
2								852	2,250	3,430	1,540	2,470
3								1,020	2,440	3,290	1,730	2,380
4								1,040	2,680	2,250	2,420	2,340
5								1,300	3,020	2,120	2,460	2,350
6								1,340	3,320	2,000	2,060	2,470
7								1,540	3,270	2,930	2,140	2,380
8								1,800	2,960	3,320	2,180	2,250
9								1,790	2,960	3,500	2,100	2,250
10								2,240	2,910	3,440	2,390	2,300
11								2,580	3,060	3,200	2,170	2,350
12								2,940	3,360	3,180	1,600	2,040
13								3,330	3,500	3,400	1,650	2,090
14								3,510	3,520	3,320	1,710	1,980
15								3,700	3,600	3,110	1,640	1,510
16								3,680	3,700	2,780	1,620	1,460
17								3,630	3,510	2,890	1,610	1,470
18								3,350	3,560	2,800	1,660	1,410
19								3,340	3,510	2,920	1,790	1,480
20								3,510	3,500	2,880	2,110	1,640
21								3,420	3,420	2,830	2,410	1,630
22								3,210	3,350	2,750	2,160	1,820
23								2,660	3,460	2,870	2,270	1,840
24								2,910	3,500	2,320	2,790	1,820
25								3,480	3,510	2,320	2,850	1,690
26								3,120	3,450	2,280	2,820	1,540
27								2,610	3,410	2,280	2,860	1,520
28								3,040	3,440	2,760	2,840	1,520
29								2,890	3,480	2,740	2,820	1,480
30								2,600	3,420	2,700	2,300	1,410
31								2,450	-	1,690	2,280	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....								-	-	-	-	-
February.....								-	-	-	-	-
March.....								-	-	-	-	-
April.....								-	-	-	-	-
May.....								79,670	3,700	778	2,570	158,000
June.....								97,280	3,700	2,210	3,243	193,000
July.....								87,700	3,500	1,690	2,829	174,000
August.....								66,390	2,880	1,500	2,142	131,700
September.....								57,220	2,470	1,410	1,907	113,500
The period.....								-	-	-	-	770,200

## Snake River at Clough Ranch, near Blackfoot, Idaho

Location.- Water-stage recorder, lat.  $43^{\circ}07'$ , long.  $112^{\circ}31'$ , in SE $\frac{1}{4}$  sec. 30, T. 3 S., R. 34 E., a quarter of a mile downstream from Blackfoot River and 14 miles southwest of Blackfoot. Altitude of gage, 4,401 feet (from river profile map).

Records available.- June 1910 to September 1941.

Extremes.- Maximum discharge during year, 8,420 second-feet May 29 (gage height, 6.29 feet); minimum, 162 second-feet July 19 (gage height, 0.60 foot); minimum gage height, 0.55 foot May 24, 25.

1910-41: Maximum discharge, 46,200 second-feet June 18, 1918 (gage height, 14.80 feet); minimum, 111 second-feet Nov. 10, 1934 (gage height, 0.80 foot). Late in summer of 1905 there was no flow in Snake River for a distance of 10 miles in vicinity of Blackfoot. On Aug. 9, 1905, discharge of Snake River just below mouth of Blackfoot River was 39 second-feet, supplied by ground-water inflow a short distance above station.

Remarks.- Records excellent. Flow partly regulated by Jackson Lake (see p. 11 ), Henrys Lake (see p. 49 ), Island Park Reservoir (see p. 41 ), Grassy Lake (see p. 49 ), and Blackfoot-Marsh Reservoir, having a combined capacity of 1,483,000 acre-feet. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,090	2,580	2,540	2,220	1,670	2,370	3,660	4,900	6,480	1,990	556	425
2	2,360	2,540	2,550	2,220	1,480	2,600	3,730	5,310	6,020	1,300	425	298
3	2,580	2,440	2,520	1,720	1,380	2,790	3,760	5,650	5,050	731	745	198
4	2,500	2,430	2,520	1,310	1,380	2,950	3,740	6,320	3,390	1,520	1,070	185
5	2,520	2,370	2,520	1,250	1,500	2,840	3,650	6,960	2,240	1,260	787	180
6	2,480	2,340	2,440	1,210	1,580	2,700	3,510	7,100	2,490	378	934	486
7	2,430	2,320	2,420	1,440	1,650	2,460	3,980	6,620	3,640	178	984	1,150
8	2,340	2,260	2,390	2,110	1,770	2,330	3,670	5,720	4,880	208	710	1,220
9	2,260	2,370	2,390	2,160	1,940	2,300	3,520	4,780	5,330	445	801	1,320
10	2,150	2,540	2,270	2,160	2,020	2,250	3,320	4,700	5,420	474	1,200	1,220
11	2,120	2,640	2,180	2,050	2,090	2,220	3,280	4,440	5,630	568	2,330	780
12	2,080	2,800	1,870	1,920	2,480	2,150	3,340	4,140	4,600	532	3,680	510
13	1,950	2,730	1,330	1,890	2,480	2,080	3,260	3,640	2,610	516	4,400	450
14	1,930	2,760	1,330	1,590	2,500	1,950	3,340	3,490	1,290	405	3,450	355
15	1,850	2,680	1,250	1,730	2,220	1,940	3,400	3,940	880	278	2,680	310
16	1,790	2,840	1,230	1,790	2,290	1,940	3,400	3,960	1,700	198	2,540	568
17	1,750	2,720	1,390	1,840	2,130	1,920	3,490	2,980	2,160	220	2,100	492
18	1,650	2,680	1,540	2,040	2,180	1,900	3,610	1,450	1,890	168	1,680	530
19	1,530	2,640	1,710	1,840	2,160	2,150	3,520	1,120	1,850	152	1,840	588
20	1,520	2,600	1,900	1,980	2,220	2,220	3,190	1,940	1,880	270	1,050	456
21	1,460	2,560	2,400	2,150	2,330	2,870	2,980	1,660	1,780	843	668	410
22	1,440	2,430	2,420	2,160	2,500	2,910	2,850	640	1,380	1,220	282	516
23	1,480	2,360	2,500	2,190	2,640	2,840	2,720	220	1,100	1,140	202	689
24	1,500	2,350	2,550	2,190	2,740	2,870	2,670	170	1,630	1,090	306	925
25	1,480	2,290	2,540	2,250	2,720	2,900	2,520	1,010	1,490	1,070	801	1,290
26	1,560	2,320	2,520	2,290	2,780	2,840	2,840	2,330	1,110	1,160	925	1,430
27	1,570	2,460	2,680	2,290	2,620	2,820	3,110	4,200	594	1,430	976	1,360
28	1,570	2,440	2,500	2,320	2,480	2,870	3,440	5,970	328	1,530	950	1,270
29	1,930	2,460	2,440	2,150	-	3,060	3,800	7,960	410	1,100	801	1,210
30	2,400	2,500	2,580	1,990	-	3,200	4,510	8,160	1,710	647	661	1,170
31	2,430	-	2,370	1,880	-	3,480	-	7,200	-	314	486	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						60,700	2,580	1,440	1,958	120,400		
November.....						75,430	2,840	2,260	2,514	149,600		
December.....						87,590	2,680	1,230	2,180	134,100		
Calendar year 1940.....						835,201	6,510	150	2,282	1,657,000		
January.....						60,210	2,320	1,210	1,942	119,400		
February.....						58,860	2,780	1,380	2,138	118,700		
March.....						78,930	3,480	1,900	2,546	156,600		
April.....						102,280	4,310	2,520	3,409	202,900		
May.....						128,560	8,160	170	4,147	255,000		
June.....						80,842	6,480	328	2,695	160,300		
July.....						23,395	1,990	162	755	46,400		
August.....						40,720	4,400	202	1,314	80,770		
September.....						21,991	1,430	150	733	43,680		
Water year 1940-41.....						800,508	8,160	162	2,193	1,588,000		

a No gage-height record; discharge computed on basis of records for station near Shelley.



## American Falls Reservoir at American Falls, Idaho

Location.— Water-stage recorder, lat. 42°46', long. 112°53', in sec. 30, T. 7 S., R. 31 E., at outlet gates of reservoir on Snake River at American Falls. Datum of gage is mean sea level (levels by Bureau of Reclamation).

Records available.— March 1926 to September 1941.

Extremes.— Maximum contents during year, 1,701,120 acre-feet Apr. 21 (elevation, 4,354.52 feet); minimum, 271,950 acre-feet Oct. 1 (elevation, 4,317.00 feet).

1926-41: Maximum contents, 1,726,580 acre-feet June 10, 1938 (elevation, 4,354.97 feet); minimum, 3,240 acre-feet Aug. 30, 1926 (elevation, 4,296.82 feet).

Remarks.— Reservoir is formed by concrete gravity dam with earth dikes at each end; partial storage began in 1926, full storage in 1927. Capacity, 1,700,000 acre-feet between elevations 4,295.66 feet (bottom of outlet gate) and 4,354.50 feet (top of spillway radial gates). Small amount of dead storage. Water is used for irrigation under canals diverting from Snake River at Minidoka and Milner Dams. Contents as here given are computed from mean daily elevations; all available for release.

Cooperation.— Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
1	271,950	483,320	715,130	945,560	1,114,210	1,318,770
2	280,630	491,690	723,890	952,650	1,113,310	1,327,190
3	285,970	502,000	731,610	959,330	1,119,250	1,336,110
4	296,970	510,540	740,740	963,920	1,123,880	1,345,010
5	306,620	519,370	748,110	968,920	1,128,010	1,354,410
6	314,660	525,940	755,600	974,350	1,129,850	1,362,980
7	324,070	530,630	765,330	979,770	1,132,160	1,372,060
8	332,850	536,500	772,190	985,250	1,133,080	1,379,120
9	340,210	540,310	778,320	992,110	1,139,530	1,387,190
10	349,220	545,300	785,890	998,980	1,147,370	1,394,260
11	356,790	553,610	796,610	1,005,420	1,156,590	1,403,320
12	364,120	561,960	806,610	1,011,430	1,166,370	1,409,970
13	369,340	569,530	806,610	1,017,870	1,177,870	1,416,140
14	376,850	577,100	811,060	1,023,870	1,187,090	1,419,740
15	383,350	584,060	814,760	1,029,970	1,196,040	1,423,340
16	390,110	591,220	818,470	1,037,010	1,204,510	1,427,960
17	396,510	598,720	823,660	1,044,080	1,212,590	1,432,590
18	402,920	606,540	829,750	1,050,220	1,220,260	1,434,650
19	408,520	615,290	836,230	1,056,520	1,227,450	1,441,330
20	414,210	624,610	842,700	1,062,990	1,235,610	1,448,020
21	419,420	632,660	850,710	1,070,470	1,243,280	1,456,250
22	424,870	642,010	859,850	1,078,140	1,251,910	1,462,520
23	429,870	652,100	867,240	1,086,700	1,261,580	1,470,370
24	434,920	660,400	875,870	1,094,620	1,271,610	1,482,420
25	439,390	668,370	884,890	1,103,840	1,281,550	1,490,270
26	445,510	677,330	894,300	1,111,950	1,291,290	1,500,220
27	449,550	685,070	901,760	1,120,170	1,301,030	1,510,180
28	453,860	692,920	913,090	1,123,400	1,309,860	1,519,240
29	460,860	701,120	920,770	1,121,550	-	1,526,290
30	466,520	706,930	929,260	1,119,250	-	1,538,400
31	473,080	-	936,140	1,116,020	-	1,548,520

## SNAKE RIVER MAIN STEM

Contents, in acre-feet, of American Falls Reservoir at American Falls, Idaho,  
water year October 1940 to September 1941--Continued

Day	Apr.	May	June	July	Aug.	Sept.
1	1,557,570	1,686,550	1,503,880	1,285,930	814,020	426,260
2	1,566,710	1,683,750	1,500,220	1,274,730	799,940	412,410
3	1,573,230	1,681,500	1,496,030	1,261,580	783,720	397,540
4	1,582,470	1,678,140	1,491,840	1,249,040	769,660	386,110
5	1,586,270	1,678,140	1,484,510	1,237,050	755,240	377,850
6	1,596,050	1,678,140	1,475,610	1,225,060	740,390	368,340
7	1,605,830	1,681,500	1,467,230	1,208,280	725,640	360,460
8	1,613,980	1,679,260	1,466,710	1,190,860	710,690	352,640
9	1,622,220	1,679,260	1,467,230	1,172,490	697,360	344,580
10	1,626,090	1,675,900	1,470,900	1,157,970	683,360	338,780
11	1,634,940	1,670,870	1,472,990	1,140,450	672,350	333,090
12	1,641,870	1,665,340	1,474,040	1,123,890	661,730	329,530
13	1,649,310	1,655,940	1,471,420	1,106,540	655,750	325,260
14	1,658,160	1,647,100	1,464,610	1,091,210	651,110	321,700
15	1,661,470	1,641,020	1,456,250	1,074,530	644,260	318,380
16	1,668,660	1,634,940	1,447,500	1,057,700	637,820	317,660
17	1,678,700	1,623,330	1,438,760	1,040,100	629,760	315,560
18	1,686,790	1,615,440	1,432,590	1,022,160	620,100	315,120
19	1,693,270	1,606,330	1,423,340	1,004,990	609,040	313,510
20	1,699,440	1,590,070	1,414,600	988,680	596,220	313,740
21	1,701,120	1,579,750	1,407,400	971,430	581,340	312,360
22	1,700,560	1,569,970	1,397,270	955,150	566,500	309,380
23	1,699,440	1,558,100	1,387,190	940,180	550,290	306,860
24	1,697,200	1,645,860	1,373,570	924,010	535,030	305,700
25	1,695,520	1,530,950	1,365,500	910,660	519,650	306,860
26	1,694,400	1,522,960	1,353,920	895,970	508,260	307,080
27	1,693,830	1,518,040	1,340,550	882,140	493,000	308,230
28	1,693,830	1,513,380	1,324,220	868,420	479,720	311,900
29	1,693,830	1,512,310	1,309,370	857,190	465,440	315,350
30	1,690,470	1,510,720	1,296,160	845,370	451,970	319,800
31	-	1,507,550	-	829,750	440,180	-

## Monthly elevation and contents, water year October 1940 to September 1941

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	4,316.65	264,380	-
Oct. 31.....	4,325.14	473,080	+208,700
Nov. 30.....	4,332.74	706,930	+233,850
Dec. 31.....	4,338.86	936,140	+229,210
Calendar year 1940.....	-	-	+79,720
Jan. 31.....	4,343.01	1,116,020	+179,680
Feb. 28.....	4,347.09	1,309,860	+193,840
Mar. 31.....	4,351.74	1,548,520	+238,660
Apr. 30.....	4,354.33	1,690,470	+141,950
May 31.....	4,350.97	1,607,550	-182,920
June 30.....	4,346.81	1,296,160	-211,390
July 31.....	4,336.15	829,750	-466,410
Aug. 31.....	4,323.92	440,180	-389,570
Sept. 30.....	4,319.11	319,800	-120,380
Water year 1940-41	-	-	+55,420

## Snake River at Neeley, Idaho

Location.— Water-stage recorder, lat. 42°45', long. 112°54', in sec. 31, T. 7 S., R. 31 E., half a mile downstream from American Falls Dam. Datum of gage is 4,242.8 feet above mean sea level (river profile survey). Records computed to show flow at former site in sec. 11, T. 8 S., R. 30 E., half a mile north of Neeley and 3 miles downstream from present site, by adding inflow between sites.

Records available.— March 1906 to September 1941.

Extremes.— Maximum discharge during year, 12,600 second-feet May 30 (gage height, 5.95 feet); minimum, 111 second-feet Dec. 8-10 (gage height, 0.50 foot).  
1906-41: Maximum daily discharge, 48,400 second-feet June 20, 1918 (gage height, 13.5 feet at site and datum then in use); minimum, that of Dec. 8-10, 1940.

Remarks.— Records excellent. Flow regulated by American Falls Reservoir (see p. 19) and other reservoirs, having a combined usable capacity of 3,200,000 acre-feet. About 700,000 acres of land irrigated by water diverted from river and tributaries above station.

Cooperation.— Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,880	585	982	1,120	8,020	907	2,300	9,360	12,000	10,100	10,700	9,890
2	1,840	632	1,040	1,180	2,280	961	2,280	9,320	10,700	10,800	10,800	9,780
3	1,840	640	1,040	1,220	1,680	1,150	2,280	9,850	9,750	10,200	10,800	9,600
4	380	748	1,030	1,320	1,650	1,100	3,140	9,850	9,670	10,200	10,800	8,530
5	1,320	711	1,040	1,320	2,200	1,170	2,740	9,540	9,450	10,300	10,800	7,780
6	623	2,240	1,090	1,530	2,980	1,150	2,350	9,320	9,320	10,600	11,000	7,380
7	877	2,340	1,100	1,260	3,660	1,140	2,650	9,320	8,220	10,900	10,900	7,020
8	751	2,050	1,170	1,240	3,040	1,170	2,170	9,720	7,040	11,100	10,900	7,160
9	777	2,110	1,190	1,510	780	1,150	2,190	9,670	6,880	11,200	10,600	7,160
10	860	1,950	1,170	1,260	802	1,160	2,200	9,720	6,930	11,300	10,500	6,920
11	1,470	1,920	1,170	1,270	844	1,090	2,210	9,800	7,080	11,700	10,300	6,020
12	1,420	1,920	1,160	1,260	781	956	2,520	10,100	7,450	11,600	10,200	5,570
13	1,600	1,760	1,440	1,250	883	2,160	2,490	10,600	7,910	11,100	9,890	5,240
14	1,420	1,830	1,470	1,280	885	2,270	2,480	10,600	8,130	11,000	9,320	3,860
15	1,880	1,850	1,440	1,170	882	2,290	2,900	10,500	8,090	11,100	9,140	4,650
16	1,280	1,220	1,440	1,130	849	2,290	2,910	10,500	8,090	11,200	9,140	4,470
17	1,360	1,350	1,360	994	887	2,260	2,780	10,500	8,260	11,100	9,140	3,730
18	1,290	1,240	1,140	1,160	1,050	2,210	1,730	10,400	8,620	11,200	9,500	3,420
19	1,290	1,280	920	1,100	1,080	2,270	2,550	10,500	8,790	11,500	10,600	3,890
20	1,420	784	752	1,080	1,020	2,240	2,670	10,800	8,790	11,500	11,300	4,400
21	1,480	715	779	1,110	1,050	2,220	5,710	9,890	8,750	11,500	11,000	4,000
22	1,390	743	795	1,090	1,140	2,270	6,050	9,540	8,840	11,300	10,600	4,860
23	1,780	352	864	687	1,180	930	5,850	9,410	9,010	11,200	10,600	4,510
24	1,790	782	794	654	1,200	873	6,770	9,560	9,140	11,400	10,600	4,150
25	1,800	759	794	705	1,020	637	6,330	9,360	9,230	11,300	10,600	3,420
26	1,820	979	996	701	850	671	5,910	9,560	9,800	11,200	10,600	3,500
27	1,880	994	1,010	1,740	907	676	5,740	9,670	10,300	11,000	10,500	3,290
28	1,830	988	1,140	4,900	907	673	6,330	10,100	10,400	10,500	10,700	1,990
29	1,650	959	1,210	6,020	-	677	7,700	10,500	10,400	10,300	10,800	1,780
30	1,780	979	1,160	6,020	-	1,190	9,060	11,700	10,200	10,300	10,400	1,610
31	1,250	-	1,170	6,020	-	1,220	-	12,200	-	10,500	9,980	-
Month	Second-foot-days				Maximum		Minimum		Mean		Run-off in acre-feet	
October.....	41,688				1,930		380		1,545		86,690	
November.....	37,810				2,340		585		1,260		75,000	
December.....	33,854				1,470		752		1,092		67,160	
Calendar year 1940.....	1,787,792				12,100		154		4,830		3,506,000	
January.....	53,861				6,080		654		1,737		106,800	
February.....	42,437				6,020		780		1,516		84,170	
March.....	42,901				2,290		637		1,384		85,090	
April.....	114,970				9,060		1,730		3,832		228,000	
May.....	310,170				12,200		9,230		10,010		615,800	
June.....	267,220				12,000		6,850		8,907		530,000	
July.....	359,600				11,700		10,100		10,950		675,600	
August.....	322,710				11,300		9,140		10,410		640,100	
September.....	159,440				9,890		1,610		5,315		316,800	
Water year 1940-41.....	1,766,661				12,200		380		4,840		3,504,000	

## Lake Walcott near Minidoka, Idaho

Location.- Staff gage, lat. 42°40', long. 113°29', in sec. 1, T. 9 S., R. 25 E., in power house at Minidoka Dam on Snake River, 6 miles southeast of Minidoka. Prior to Feb. 1, 1941, hook gage on face of dam at same datum. Datum of gage is 4,200.00 feet above datum of Bureau of Reclamation, which is 49.52 feet below mean sea level.

Records available.- April 1909 to September 1917 (gage heights only), October 1917 to September 1941.

Extremes.- Maximum contents during year, 98,200 acre-feet April 22 (gage height, 45.25 feet); minimum, -4,520 acre-feet Dec. 28 (gage height, 35.50 feet).  
1909-41: Maximum contents, 110,740 acre-feet Aug. 8, 1922 (gage height, 46.28 feet); minimum, -9,040 acre-feet Nov. 1, 1913 (gage height, 35.00 feet).

Remarks.- Reservoir is formed by rock-fill dam with concrete core; storage began in 1909. Capacity, 107,240 acre-feet between gage height 36.00 feet (sill of power-house penstock) and 46.00 feet (top of flashboards). Considerable amount of dead storage. Gage read twice daily at 8 a.m. and 4:30 p.m. Contents as given herein are computed from mean gage heights. Water is used for power development and irrigation on the Minidoka project of Bureau of Reclamation.

Cooperation.- Gage-height record and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-720	570	-2,890	-3,440	39,860	56,980	91,460	96,870	90,760	78,130	77,000	77,680
2	-1,440	190	-2,820	-3,440	48,100	58,760	93,790	96,870	94,980	78,580	77,480	77,000
3	-2,160	0	-2,350	-3,440	47,140	56,870	94,490	96,390	94,720	78,350	78,020	76,210
4	-1,620	-720	-2,260	-3,440	47,670	57,410	96,390	95,180	95,430	78,020	77,450	76,850
5	-2,440	-260	-2,160	-3,070	45,310	57,410	94,140	96,390	94,950	77,900	77,450	75,650
6	-900	-540	-2,260	-2,620	51,280	57,840	95,670	95,150	95,430	78,020	78,920	72,940
7	-1,080	-360	-1,800	-2,160	55,750	58,270	96,510	96,390	95,070	76,020	79,260	71,610
8	-810	-260	-1,620	-1,720	60,200	58,450	96,390	96,030	94,720	78,020	79,370	69,630
9	-1,440	-720	-1,350	-1,440	60,100	59,130	96,030	96,630	95,790	77,560	79,710	67,870
10	-1,350	-1,440	-1,260	-1,170	59,560	59,450	95,550	96,390	94,250	77,680	79,480	66,770
11	-1,170	-1,440	-810	-720	59,990	60,420	95,150	96,150	94,720	77,900	79,030	63,610
12	0	570	-540	-540	60,310	60,740	95,070	95,550	94,950	78,350	78,680	60,200
13	-630	1,330	-810	100	60,850	61,060	96,150	94,140	95,550	78,470	79,260	56,120
14	380	2,000	-360	190	60,100	63,700	96,270	94,020	94,020	78,470	79,030	51,820
15	570	2,000	-80	570	59,560	66,990	95,150	94,250	92,560	78,020	78,500	46,090
16	480	2,290	0	670	58,480	70,070	95,310	94,250	91,810	77,790	78,130	43,660
17	570	1,810	380	670	58,050	73,220	97,350	94,140	92,530	77,450	77,680	40,170
18	570	950	380	570	57,190	75,760	97,230	91,290	88,660	76,660	76,770	36,430
19	570	760	290	560	56,980	78,800	96,390	91,920	87,270	77,560	76,550	32,290
20	670	950	-360	670	56,870	81,510	95,910	91,690	86,330	77,680	78,350	29,800
21	570	-360	-900	570	56,760	85,050	97,350	91,230	85,870	77,450	79,260	27,560
22	570	-810	-1,620	760	56,660	87,960	98,200	90,410	85,400	77,680	76,920	24,920
23	380	-1,170	-2,350	570	56,760	90,410	97,720	88,660	84,470	77,680	77,340	22,720
24	290	-1,720	-2,710	-360	56,760	81,230	96,990	86,800	81,960	77,450	77,000	25,530
25	-810	-2,710	-3,260	-1,170	56,980	81,230	95,080	85,520	81,400	77,680	76,550	23,120
26	-80	-3,160	-3,800	-1,800	57,410	81,690	97,840	83,310	80,160	78,020	77,110	23,700
27	-720	-3,260	-3,800	-2,350	57,300	81,810	95,910	81,740	79,030	78,350	76,100	23,090
28	-540	-3,160	-4,060	1,530	57,190	81,230	95,430	81,280	77,900	78,020	76,770	23,090
29	0	-3,070	-3,620	11,020	-	90,290	96,030	81,620	77,680	77,230	77,000	20,860
30	-180	-2,890	-3,440	20,950	-	90,410	97,350	81,550	77,900	77,230	77,450	18,650
31	380	-	-3,890	30,630	-	90,990	-	86,870	-	76,660	78,020	-

Note.- Negative figures indicate storage necessary to fill reservoir to sill of powerhouse penstock.

Monthly gage height and contents, water year October 1940 to September 1941

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	35.90	-900	-
Oct. 31.....	36.04	380	+1,280
Nov. 30.....	35.68	-2,890	-3,270
Dec. 31.....	35.57	-3,850	-990
Calendar year 1940	-	-	-69,990
Jan. 31.....	39.10	30,630	+34,510
Feb. 28.....	41.07	57,190	+26,560
Mar. 31.....	44.64	90,990	+33,800
Apr. 30.....	45.18	97,350	+6,360
May 31.....	44.26	86,870	-10,790
June 30.....	43.50	77,900	-9,670
July 31.....	43.39	76,660	-1,240
Aug. 31.....	43.51	78,020	+1,360
Sept. 30.....	37.94	18,550	-59,170
Water year 1940-41	-	-	+19,750

Note.- Negative figures of contents indicate storage necessary to fill reservoir to sill of powerhouse penstock.

## Snake River near Minidoka, Idaho

Location.- Water-stage recorder, lat. 42°40', long. 113°30', in sec. 2, T. 9 S., R. 25 E., 1 mile downstream from Minidoka Dam and 6 miles southeast of Minidoka. Datum of gage is 4,132.2 feet above mean sea level (river profile survey).

Records available.- April 1910 to September 1941. August 1895 to December 1899 and May 1901 to December 1910 at site at Montgomery Ferry, 6 miles downstream.

Extremes.- Maximum discharge during year, 8,500 second-feet July 15, 20 (maximum gage height, 8.55 feet July 20); minimum, 545 second-feet Oct. 7 (gage height, 3.08 feet). 1910-41: Maximum discharge, 45,900 second-feet June 21, 1918 (gage height, 16.02 feet); minimum, 59 second-feet Nov. 18, 1936 (gage height, 1.56 feet).

Remarks.- Records good. Flow regulated by American Falls Reservoir (see p. 19), Lake Walcott (see p. 22), and other reservoirs, having a combined usable capacity of about 3,800,000 acre-feet, and greatly reduced by diversions above station for irrigation on Minidoka project.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,390	842	1,200	1,360	1,370	1,130	1,120	7,610	7,340	7,550	7,980	7,500
2	1,300	842	1,200	1,360	1,360	1,130	1,550	7,690	7,230	7,550	8,010	7,440
3	1,220	834	1,210	1,360	1,360	1,130	1,730	7,850	7,120	7,660	8,090	7,550
4	677	874	1,220	1,430	1,370	1,110	2,380	7,800	7,040	7,610	7,980	7,440
5	574	914	1,250	1,360	1,380	1,110	2,790	7,520	6,960	7,740	7,980	7,040
6	556	1,410	1,270	1,360	1,400	1,110	2,570	7,280	6,740	7,690	7,980	6,800
7	545	2,140	1,270	1,350	1,400	1,070	2,570	7,070	6,420	7,880	8,010	6,660
8	556	2,080	1,260	1,360	1,410	1,040	2,520	7,200	5,880	8,120	8,010	6,550
9	562	1,990	1,270	1,360	1,410	1,040	2,500	7,360	5,760	8,310	7,980	6,400
10	556	2,030	1,260	1,370	1,380	1,040	2,460	7,390	5,610	8,310	7,980	6,270
11	562	2,030	1,260	1,360	1,370	1,000	2,310	7,520	5,610	8,310	8,010	6,290
12	1,080	1,980	1,270	1,350	1,400	982	2,260	7,470	5,910	8,310	8,040	6,140
13	1,140	1,870	1,360	1,340	1,390	954	2,330	7,520	6,240	8,310	7,900	5,940
14	1,120	1,870	1,560	1,350	1,370	740	2,340	7,610	6,500	8,310	7,510	5,660
15	1,030	1,920	1,600	1,370	1,370	634	2,390	7,580	6,550	8,390	7,360	5,540
16	938	1,600	1,630	1,340	1,360	677	2,630	7,550	6,580	8,390	7,340	5,220
17	938	1,640	1,610	1,300	1,350	698	2,680	7,610	6,560	8,360	7,360	4,640
18	938	1,680	1,580	1,310	1,350	726	2,360	7,630	6,850	8,360	7,420	4,050
19	945	1,690	1,610	1,310	1,350	740	2,080	7,660	7,090	8,360	7,500	4,160
20	978	1,640	1,430	1,310	1,350	761	3,120	7,210	6,980	8,360	7,770	4,420
21	1,050	1,540	1,380	1,320	1,350	782	3,930	7,470	6,800	8,360	8,120	4,490
22	1,130	1,500	1,380	1,320	1,340	810	5,270	7,360	6,740	8,280	8,090	4,470
23	1,220	1,290	1,370	1,320	1,340	712	5,340	7,230	6,770	8,250	8,150	4,010
24	1,300	1,290	1,370	1,320	1,320	652	5,420	7,170	7,040	8,280	8,170	3,470
25	1,440	1,290	1,380	1,320	1,210	652	5,440	7,230	7,390	8,340	8,010	3,280
26	1,480	1,270	1,360	1,320	1,170	616	5,060	7,230	7,520	8,250	7,980	3,010
27	1,500	1,240	1,380	1,320	1,150	810	5,060	7,280	7,800	8,170	7,880	3,050
28	1,510	1,200	1,370	1,330	1,130	954	5,180	7,310	7,930	8,150	7,880	2,900
29	1,510	1,200	1,360	1,340	-	930	5,680	7,280	7,980	8,040	7,930	2,200
30	1,390	1,200	1,360	1,350	-	930	6,820	7,360	7,820	7,880	7,930	1,820
31	1,030	-	1,380	1,370	-	1,000	-	7,360	-	7,930	7,630	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						32,166	1,610	545	1,038	53,800		
November.....						44,276	2,140	834	1,476	87,820		
December.....						42,290	1,630	1,200	1,364	85,880		
Calendar year 1940.....						1,441,380	8,720	545	3,938	2,859,000		
January.....						41,660	1,430	1,300	1,544	82,650		
February.....						37,500	1,410	1,130	1,339	74,360		
March.....						27,660	1,330	616	892	54,840		
April.....						99,870	6,620	1,120	3,529	198,100		
May.....						230,810	7,850	7,070	7,445	457,800		
June.....						204,860	7,980	5,610	6,829	406,300		
July.....						251,610	8,390	7,550	8,123	499,500		
August.....						243,920	8,170	7,340	7,868	483,800		
September.....						154,400	7,650	1,820	5,147	306,200		
Water year 1940-41.....						1,411,212	8,390	545	3,866	2,799,000		

## SNAKE RIVER MAIN STEM

## Snake River at Milner, Idaho

Location.- Water-stage recorder, lat.  $42^{\circ}32'$ , long.  $114^{\circ}01'$ , in sec. 29, T. 10 S., R. 21 E., at Milner, a quarter of a mile downstream from Milner Dam. Altitude of gage, 4,062 feet (from river-profile map).

Records available.- May 1909 to September 1941.

Extremes.- Maximum discharge during year, 2,180 second-feet Apr. 23 (gage height, 6.80 feet); minimum, 3 second-feet Apr. 3 (gage height, 1.20 feet).

1909-41: Maximum discharge, 44,400 second-feet June 12, 1909 (gage height, 20.10 feet, site and datum then in use); minimum, 2 second-feet Mar. 17-28, 1936 (gage height, 1.18 feet).

Remarks.- Records good. Flow regulated by American Falls Reservoir (see p. 19), Lake Walcott (see p. 22) and other reservoirs having a combined usable capacity of about 3,300,000 acre-feet, and greatly reduced by diversions above Milner Dam for irrigation. About 1,300,000 acres of land irrigated by diversion from river and tributaries above station. Flow includes some stored water released for use downstream by Idaho Power Co.

Cooperation.- Gage-height record furnished by Twin Falls Canal Co. and North Side Canal Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	460	325	540	554	284	12	7	5	6	8	305
2	252	464	339	540	554	284	6	8	6	6	8	314
3	252	460	368	544	549	284	3	9	6	6	8	350
4	255	492	368	544	549	284	4	10	7	6	8	356
5	284	544	368	544	549	278	4	35	6	6	8	356
6	446	685	368	544	549	273	8	12	7	6	8	353
7	443	1,340	368	540	554	273	15	9	7	7	8	356
8	443	1,220	368	544	554	276	17	8	6	7	8	356
9	440	1,140	368	544	554	284	18	6	6	7	8	356
10	440	1,140	368	549	554	284	17	5	6	7	8	356
11	457	1,140	368	549	554	294	17	5	6	8	8	356
12	460	1,120	368	544	540	300	16	5	6	8	8	353
13	457	1,030	374	544	554	294	15	5	6	8	8	353
14	464	973	476	549	554	206	15	5	6	9	8	353
15	460	973	544	549	554	8	12	5	6	9	8	353
16	460	564	540	554	554	8	10	5	6	8	8	353
17	460	311	544	549	554	7	20	5	6	8	8	353
18	460	308	549	554	549	6	663	5	6	8	8	353
19	460	305	540	554	549	5	13	5	6	8	8	348
20	464	297	540	549	549	5	11	5	7	8	8	350
21	464	297	567	549	549	5	10	6	11	6	279	356
22	464	300	598	549	549	5	525	6	9	8	316	356
23	460	300	598	549	549	5	859	6	7	8	350	356
24	460	300	598	549	549	5	13	5	6	9	350	356
25	464	297	598	549	357	5	15	5	6	11	350	356
26	464	297	590	549	252	5	37	5	6	10	350	356
27	464	308	567	549	268	19	10	5	6	9	356	356
28	464	316	549	549	284	36	9	5	6	9	398	356
29	464	319	544	549	-	51	8	5	6	9	398	356
30	457	316	544	549	-	29	7	5	6	9	365	359
31	460	-	540	549	-	25	-	5	-	9	305	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						13,194	464	252	426	26,170		
November.....						18,016	1,340	297	601	35,750		
December.....						14,744	598	325	476	26,240		
Calendar year 1940.....						136,194	3,430	8	372	270,100		
January.....						16,967	554	540	547	33,650		
February.....						14,388	554	252	514	28,540		
March.....						4,127	300	5	133	8,190		
April.....						2,389	859	3	79.6	4,740		
May.....						217	35	5	7.00	430		
June.....						192	11	5	6.40	381		
July.....						245	11	6	7.90	486		
August.....						3,977	398	8	128	7,890		
September.....						10,546	359	305	352	20,920		
Water year 1940-41.....						99,002	1,340	3	271	196,400		

## Snake, River near Kimberly, Idaho

Location.- Water-stage recorder, lat. 42°36', long. 114°22', in NW¼ sec. 4, T. 10 S., R. 18 E., 1,200 feet downstream from Twin Falls power plant, 2½ miles upstream from Shoshone Falls, and 4 miles north of Kimberly.

Records available.- July 1923 to September 1941.

Average discharge.- 18 years, 2,131 second-feet.

Extremes.- Maximum discharge during year, 2,330 second-feet Apr. 23 (gage height, 8.66 feet); minimum, 29 second-feet (regulated) July 4 (gage height, 1.30 feet).  
1923-41: Maximum discharge, 27,200 second-feet July 4, 1927 (gage height, 14.78 feet, site and datum then in use), from rating curve extended above 20,000 second-feet; minimum, undetermined leakage through Twin Falls power plant at times since Nov. 23, 1935.

Remarks.- Records good. Practically entire flow is diverted at Milner during irrigation season; no diversions between Milner and Kimberly. Flow regulated by Twin Falls power plant.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	747	a910	766	909	925	643	334	322	349	395	408	677		
2	749	a910	722	913	929	590	349	347	356	351	453	733		
3	726	897	742	937	909	627	333	348	359	493	419	740		
4	744	a900	810	937	913	612	322	342	356	139	442	789		
5	736	a900	774	925	921	608	345	366	341	479	420	796		
6	741	a1,000	768	953	925	613	299	342	368	383	416	789		
7	850	a1,300	766	953	925	605	328	349	400	383	418	803		
8	925	a1,700	765	929	921	587	304	369	409	362	423	792		
9	909	a1,600	771	921	937	588	334	333	389	390	407	769		
10	897	1,550	772	941	969	613	334	331	382	383	413	796		
11	901	1,570	f769	941	973	627	349	340	381	395	424	861		
12	957	1,550	f768	941	965	609	338	340	381	376	437	824		
13	909	1,540	749	933	925	621	322	320	370	374	416	838		
14	925	1,410	759	949	901	646	342	324	381	382	454	845		
15	937	1,400	758	941	917	576	324	321	340	356	423	838		
16	949	1,360	933	949	909	358	319	313	379	396	438	831		
17	957	921	953	909	881	397	339	330	343	387	435	828		
18	941	765	977	917	921	298	562	305	373	395	448	828		
19	921	755	977	941	893	285	709	322	362	388	451	824		
20	925	754	953	925	885	348	334	330	358	382	447	817		
21	949	741	945	921	893	350	367	322	366	386	605	824		
22	933	731	977	937	881	372	497	326	363	394	632	824		
23	933	713	1,010	945	897	288	1,050	290	349	397	723	838		
24	933	a725	1,020	941	885	354	850	372	358	416	704	838		
25			921	1,010	929	886	317	398	345	409	778	828		
26	909	a725	1,000	953	731	328	386	330	358	399	803	828		
27	933		1,020	953	579	342	316		354	418	744	828		
28	925		985	921	600	332	394		376	453	877	806		
29	925		945	925	-	356	326		333	349	409	877	817	
30	a920		969	937	-	337	361		330	365	429	909	817	
31	a920		-	949	909	-	404		-	367	-	408	810	-
Month						Second-foot-days	Maximum		Minimum	Mean	Run-off in acre-feet			
October.....						27,547	957		726	889	54,640			
November.....						30,952	1,700	-	1,032	61,390				
December.....						27,082	1,020	722	874	53,720				
Calendar year 1940.....						281,679	3,760	271	770	558,700				
January.....						28,935	953	909	933	57,390				
February.....						24,795	973	579	886	49,180				
March.....						14,609	846	285	471	28,930				
April.....						12,145	1,030	299	495	24,090				
May.....						10,354	372	290	334	20,540				
June.....						10,860	409	334	362	21,540				
July.....						12,137	493	139	392	24,070				
August.....						17,036	909	407	550	33,790				
September.....						24,286	861	677	810	48,170				
Water year 1940-41.....						240,735	1,700	139	600	477,500				

a No gage-height record; discharge computed on basis of records for Snake River at Milner and near Twin Falls.

f Discharge computed from partly-estimated gage heights.

## Snake River near Twin Falls, Idaho

Location.- Water-stage recorder, lat. 42°36', long. 114°29', in SW¼SW¼ sec. 33, T. 9 S., R. 17 E., at Perrine Bridge, 200 feet upstream from outlet of Blue Lakes, 4 miles north of the city of Twin Falls, and 4 miles downstream from Shoshone Falls.

Records available.- September 1911 to June 1917, May 1919 to September 1941.

Average discharge.- 27 years (1911-16, 1919-41), 3,671 second-feet.

Extremes.- Maximum discharge during year, 1,940 second-feet Nov. 8 (gage height, 3.85 feet); minimum, 317 second-feet (regulated) Mar. 27, 28 (gage height, 1.84 feet).  
1911-17, 1919-41: Maximum discharge observed, 32,200 second-feet June 10, 1941 (gage height, 13.3 feet) from rating curve extended above 29,000 second-feet; minimum, 250 second-feet (estimated) Apr. 16, 1936.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Flow regulated by Twin Falls and Shoshone Falls power plants. No diversion except by small ranch ditches between this station and station at Milner, where practically entire flow is diverted during irrigation season.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	961	1,080	878	1,010	995	692	505	450	516	544	a560	952
2	961	1,100	878	1,010	1,010	706	450	455	527	544	a560	870
3	970	1,080	878	1,010	1,010	672	446	460	522	554	578	970
4	902	1,080	878	1,030	995	692	450	455	516	465	560	978
5	927	1,080	927	1,020	1,000	713	455	465	516	544	560	978
6	952	1,120	918	1,030	1,010	706	442	465	527	602	560	970
7	961	1,460	910	1,080	1,020	692	442	465	602	538	516	970
8	1,040	1,910	910	1,030	1,010	685	446	455	640	532	554	978
9	1,090	1,770	910	1,010	1,010	596	446	450	614		549	978
10	1,070	1,730	910	1,030	1,060	686	460	450	520		554	970
11	1,080	1,740	902	1,030	1,060	685	470	465	602		549	1,000
12	1,090	1,730	902	1,020	1,060	692	465	455	554		560	1,000
13	1,100	1,730	886	1,010	995	692	450	450	544		560	986
14	1,090	1,610	870	1,030	986	699	455	442	549		544	1,000
15	1,090	1,620	878	1,060	986	640	446	450	549		560	1,000
16	1,090	1,560	961	1,050	995	495	455	446	532		560	1,000
17	1,100	1,210	1,060	1,010	970	480	455	450	538		572	970
18	1,100	986	1,080	1,010	986	437	495	450	538		596	978
19	1,090	927	1,090	1,040	978	406	808	460	549		590	978
20	1,080	902	1,070	1,040	978	538	620	450	544		566	978
21	1,100	910	1,060	1,030	978	538	475	450	554		666	970
22	1,110	902	1,080	1,040	978	437	516	446	560		830	970
23	1,100	878	1,120	1,050	995	432	713	450	516		808	1,000
24	1,100	862	1,130	1,050	986	394	1,170	450	522		862	1,080
25	1,080	878	1,120	1,030	978	424	672	455	544		918	986
26	1,100	886	1,110	1,050	902	406	527	455	522		870	986
27	1,110	870	1,140	1,080	792	398	475	470	516		862	978
28	1,100	836	1,110	1,020	672	398	475	495	544		927	978
29	1,100	838	1,070	1,020	-	424	470	490	554		978	970
30	1,090	902	1,080	1,030	-	437	437	495	566		1,070	970
31	1,090	-	1,070	1,020	-	465	-	505	-		1,010	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						32,224	1,110	902	1,059	65,110		
November.....						36,181	1,910	830	1,206	71,760		
December.....						30,786	1,140	870	983	61,060		
Calendar year 1940.....						340,417	4,480	382	930	675,200		
January.....						31,960	1,080	1,010	1,031	63,390		
February.....						27,395	1,060	672	978	54,540		
March.....						17,556	713	394	560	34,430		
April.....						15,591	1,170	437	520	30,920		
May.....						14,239	505	442	459	28,240		
June.....						16,497	640	516	550	32,720		
July.....						16,923	602	465	546	33,570		
August.....						21,009	1,070	516	678	41,670		
September.....						29,332	1,020	870	978	58,180		
Water year 1940-41.....						290,093	1,910	394	795	575,400		

a No gage-height record; discharge computed on basis of records for stations at Milner and near Kimberly.



## Snake River near Hagerman, Idaho

Location.- Water-stage recorder, lat. 42°46', long. 114°53', in NW 1/4 sec. 1, T. 8 S., R. 13 E., just upstream from Upper Salmon Falls, an eighth of a mile upstream from Owsley bridge, 4 miles south of Hagerman, and 11 miles upstream from Big Wood River. Datum of gage is 2,873.46 feet above mean sea level.

Records available.- August 1912 to June 1917, July 1919 to September 1941.

Average discharge.- 25 years (1912-15, 1919-41), 7,923 second-feet.

Extremes.- Maximum discharge during year, 7,240 second-feet Nov. 12 (gage height, 4.95 feet); minimum, 4,660 second-feet Mar. 29 (gage height, 4.31 feet).

1912-17, 1919-41: Maximum discharge, 35,100 second-feet June 10, 1914; maximum gage height, 9.12 feet June 7, 1936; minimum discharge, 4,030 second-feet July 15 to Aug. 2, 1915 (gage height, 3.1 feet). Data in 1916 and 1917 insufficient for determination of maximum and minimum discharge.

Remarks.- Records good. Practically entire flow of river diverted at Milner during irrigation season; only minor diversions below Milner.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used July 5 to Sept. 30)

4.3	4,625
4.6	5,825
4.9	7,025
5.2	8,300

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,780	6,500	6,260	6,060	6,020	5,580	5,020	4,980	a5,750	a5,500	5,740	6,420
2	6,820	6,540	6,220	5,860	6,060	5,620	5,020	5,100	a5,750	a5,400	5,740	6,380
3	6,860	6,540	6,220	5,900	6,020	5,580	5,020	5,180	a5,750	a5,400	5,740	6,420
4	6,780	6,500	6,220	6,020	6,020	5,540	5,060	5,140	a5,750	a5,300	5,700	6,460
5	6,700	6,380	6,260	6,060	6,020	5,540	5,100	5,180	a5,700	5,140	5,660	6,460
6	6,700	6,340	6,260	6,140	6,060	5,540	5,220	5,140	a5,700	5,300	5,620	6,500
7	6,660	a6,400	6,220	6,180	6,100	5,500	5,180	5,140	a6,000	5,300	5,620	6,500
8	6,700	a6,700	6,180	6,260	6,060	5,460	5,140	5,220	6,380	5,220	5,620	6,540
9	6,740	h6,940	6,180	6,220	6,060	5,420	5,100	5,280	6,380	5,220	5,700	6,520
10	6,700	a7,000	6,140	6,180	6,100	5,380	5,300	5,180	6,300	5,220	5,740	6,620
11	6,660	a7,100	6,100	6,180	6,140	5,420	5,420	5,180	6,180	5,220	5,780	6,620
12	6,680	a7,200	6,060	6,140	6,140	5,420	5,340	5,220	5,940	5,220	5,780	6,700
13	6,540	a7,100	5,980	6,140	6,100	5,420	5,340	5,180	5,780	5,220	5,620	6,700
14	6,540	a7,000	5,820	6,180	6,060	5,420	5,380	5,100	5,740	5,220	5,860	6,780
15	6,500	a6,900	5,860	6,260	6,020	5,420	5,260	5,100	5,700	5,220	5,860	6,780
16	6,580	h6,820	5,940	6,180	5,980	5,300	5,340	5,100	5,660	5,220	5,820	6,820
17	6,580	a6,800	6,100	6,140	5,940	5,180	5,500	5,060	5,620	5,260	5,820	6,860
18	6,540	a6,600	6,220	6,100	5,940	5,140	5,460	5,180	5,580	5,260	5,820	6,760
19	6,600	a6,400	6,300	6,140	5,940	5,020	5,500	5,300	5,620	5,260	5,780	6,740
20	6,600	a6,300	6,340	6,140	5,940	5,020	5,620	5,140	5,660	5,300	5,780	6,740
21	6,500	a6,300	6,300	6,180	5,940	5,180	5,380	5,060	5,660	5,300	5,780	6,780
22	6,500	a6,300	6,300	6,220	5,940	5,140	5,140	5,020	5,660	5,340	5,940	6,700
23	6,460	6,140	6,340	6,220	5,940	5,060	5,060	5,020	5,580	5,380	6,020	6,780
24	6,460	6,180	6,420	6,220	5,940	5,100	5,500	4,980	5,500	5,460	6,060	6,820
25	6,500	6,220	6,380	6,220	5,900	4,980	5,620	5,060	5,420	5,500	6,180	6,780
26	6,500	6,340	6,300	6,180	5,900	4,900	5,260	5,220	5,500	5,540	6,220	6,740
27	6,540	6,340	6,380	6,140	5,740	4,820	5,100	5,420	5,500	5,620	6,180	6,740
28	6,540	6,340	6,300	6,060	5,660	4,780	5,060	5,380	5,500	5,740	6,220	6,740
29	6,540	6,260	6,300	6,020	-	4,740	5,020	5,460	5,620	5,820	6,300	6,680
30	6,540	6,300	6,300	6,020	-	4,980	4,980	a5,500	5,540	5,780	6,380	6,680
31	6,500	-	6,300	6,060	-	5,060	-	a5,600	-	5,740	6,460	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	204,540	6,860	6,460	6,598	405,700
November.....	196,780	7,200	6,140	6,559	390,300
December.....	192,500	6,420	5,820	6,210	381,800
Calendar year 1940.....	2,169,830	8,680	4,740	5,928	4,304,000
January.....	190,020	8,260	5,860	6,130	376,900
February.....	187,680	6,140	5,660	5,989	332,600
March.....	162,620	5,620	4,740	5,246	322,600
April.....	157,440	5,620	4,980	5,248	312,300
May.....	160,800	5,600	4,980	5,187	318,900
June.....	172,420	6,380	5,420	5,747	349,000
July.....	166,620	5,820	5,140	5,375	330,500
August.....	182,740	6,460	5,620	5,895	362,500
September.....	199,840	6,860	6,380	6,661	396,400
Water year 1940-41.....	2,154,000	7,200	4,740	5,901	4,272,000

a No gage-height record; discharge computed on basis of records for Snake River below Lower Salmon Falls near Hagerman.

h Computed from staff gage reading.

## SNAKE RIVER MAIN STEM

Snake River below Lower Salmon Falls, near Hagerman, Idaho

Location.- Water-stage recorder, lat. 42°51'36", long. 114°54'42". in lot 3, sec. 2, T. 7 N., R. 13 E., half a mile downstream from Lower Salmon Falls power plant, 1 mile upstream from Big Wood (Malad) River, and 3½ miles north of Hagerman.

Records available.- November 1937 to September 1941.

Extremes.- Maximum discharge during year, 8,060 second-feet Sept. 14 (gage height, 7.83 feet); minimum, 4,260 second-feet (regulated) Mar. 20 (gage height, 5.76 feet), from rating curve extended below 5,000 second-feet.  
1937-41: Maximum discharge, 23,800 second-feet May 6, 1938 (gage height, 13.93 feet); minimum, 3,800 second-feet (regulated) Mar. 28, 29, 1938 (gage height, 5.40 feet), from rating curve extended below 5,000 second-feet.

Remarks.- Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Lower Salmon Falls power plant. Practically entire flow at Milner diverted during irrigation season; only minor diversions below Milner.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,420	7,080		6,750	6,660	6,160	5,600	5,460	6,280		6,240	6,890
2	7,450	7,160		6,520	6,660	6,200	5,600	5,660	6,300		6,240	6,840
3	7,520	7,160		6,560	6,660	6,180	5,600	5,660	6,320		6,240	6,840
4	7,450	7,100		6,640	6,640	6,160	5,640	5,600	6,320		6,200	6,920
5	7,300	7,000		6,680	6,640	6,120	5,620	5,680	6,280		6,140	6,920
6	7,280	6,940		6,780	6,690	6,120	5,780	5,640	6,280		6,120	6,960
7	7,260	6,960		6,840	6,740	6,080	5,800	5,640	6,620		6,080	7,000
8	7,280	7,340		6,840	6,630	6,060	5,720	5,700	7,000		6,040	7,060
9	7,320	7,520		6,820	6,680	6,000	5,680	5,740	7,000		6,100	7,120
10	7,280	7,460		6,780	6,700	5,960	5,660	5,680	6,950		6,100	7,140
11	7,220	7,720		6,780	6,780	6,040	6,020	5,680	6,880	5,840	6,260	7,140
12	7,180	7,780		6,760	6,720	6,040	5,920	5,680	6,640	5,840	6,200	7,220
13	7,140	7,700		6,740	6,720	6,020	5,960	5,640	6,480	5,860	6,300	7,260
14	7,140	7,660		6,780	6,680	6,000	5,600	5,680	6,460	5,960	6,320	7,320
15	7,020	7,600		6,860	6,620	6,040	5,800	5,680	6,400	5,940	6,340	7,320
16	7,060	7,580	6,600	6,820	6,600	5,940	5,780	5,680	6,260	5,840	6,300	7,360
17	7,080	7,580	6,740	6,750	6,600	5,820	6,040	5,600	6,140	5,860	6,300	7,420
18	7,060	7,220	6,860	6,740	6,680	5,740	6,080	5,660	6,120	5,900	6,300	7,340
19	7,040	7,020	6,960	6,760	6,600	5,660	6,020	5,760	6,120	5,920	6,280	7,280
20	7,040	6,920	6,980	6,780	6,680	5,540	6,200	5,680	6,140	5,940	6,260	7,260
21	7,020	6,920	6,960	6,800	6,680	5,820	5,940	5,600	6,160	5,860	6,240	7,300
22	7,040	6,920	6,940	6,820	6,600	5,800	5,740	5,640	6,120	5,860	6,380	7,260
23	7,020	6,820	7,020	6,840	6,620	5,560	5,600	5,480	6,060	5,920	6,460	7,360
24	7,020	6,760	7,040	6,820	6,640	5,700	5,940	5,600		5,960	6,520	7,380
25	7,060	6,780	7,040	6,820	6,600	5,560	6,180	5,620		5,980	6,620	7,400
26	7,120		6,960	6,820	6,660	5,420	5,780	5,680		6,040	6,680	7,340
27	7,100		7,020	6,820	6,440	5,340	5,560	5,760		6,120	6,620	7,280
28	7,100		6,960	6,760	6,500	5,260	5,560	5,840		6,240	6,640	7,500
29	7,120		6,960	6,660	-	5,300	5,500	5,940		6,300	6,740	7,260
30	7,120		6,960	6,660	-	5,520	5,460	6,040		6,300	6,800	7,280
31	7,100	-	6,900	6,700	-	5,640	-	6,140	-	6,260	6,880	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				222,420		7,520	7,020	7,175	441,200			
November.....				215,220		7,780	6,760	7,174	426,900			
December.....				212,420		7,040	-	6,852	421,500			
Calendar year 1940.....				2,376,040		9,040	5,110	6,492	4,713,000			
January.....				209,520		6,860	6,520	6,769	415,600			
February.....				185,540		6,780	6,300	6,626	369,000			
March.....				180,920		6,200	5,280	5,833	358,700			
April.....				174,020		6,200	5,460	5,801	345,200			
May.....				175,640		6,140	5,460	5,666	348,400			
June.....				189,360		7,000	-	6,312	375,600			
July.....				185,540		6,300	-	5,985	369,000			
August.....				196,940		6,880	6,040	6,353	390,600			
September.....				215,760		7,420	6,840	7,192	428,000			
Water year 1940-41.....				2,363,200		7,780	5,280	6,475	4,698,000			

a No gage-height record; discharge computed on basis of records for stations near Hagerman and at King Hill.

## Snake River at King Hill, Idaho

Location.- Water-stage recorder, lat. 43°00', long. 115°11', in SW $\frac{1}{4}$  sec. 7, T. 5 S., R. 11 E., 300 feet east of railroad station at King Hill and 20 miles downstream from Big Wood River.

Records available.- May 1909 to September 1941.

Average discharge.- 32 years, 10,550 second-feet.

Extremes.- Maximum discharge during year, 9,560 second-feet Nov. 12; maximum gage height, 7.18 feet Sept. 14; minimum discharge, 6,120 second-feet May 23 (gage height, 5.66 feet).

1909-41: Maximum discharge observed, 47,200 second-feet June 22, 1918 (gage height, 16.3 feet), from rating curve extended above 30,000 second-feet; minimum observed, 4,760 second-feet July 7-9, Aug. 15, 16, 1910 (gage height, 4.5 feet).

Remarks.- Records excellent except those for August and September, which are good. Practically entire flow at Milner diverted during irrigation season so that flow at King Hill is derived largely from springs and seepage entering below Milner.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,820	8,710	8,380	8,080	7,960	7,800	6,920	6,500	7,540	7,350	7,420	8,030
2	8,900	8,770	8,300	7,830	7,930	7,930	6,870	6,570	7,560	7,300	7,390	8,030
3	8,950	8,820	8,300	7,780	7,960	7,900	6,850	6,710	7,630	7,230	7,370	8,080
4	8,840	8,790	8,280	7,880	7,930	7,730	6,800	6,640	7,630	7,180	7,350	8,200
5	8,740	8,610	8,300	7,900	7,930	7,730	6,830	6,710	7,630	7,200	7,270	8,230
6	8,690	8,560	8,330	7,960	7,960	7,710	6,940	6,710	7,590	7,150	7,230	8,330
7	8,640	8,560	8,280	8,030	8,130	7,560	6,960	6,660	8,000	7,390	7,150	8,190
8	8,640	8,970	8,260	8,080	8,160	7,540	6,830	6,730	8,580	7,110	7,110	8,260
9	8,690	9,230	8,260	8,060	8,100	7,470	6,760	6,830	8,710	7,060	7,130	8,360
10	8,660	9,160	8,180	8,030	8,100	7,370	6,940	6,730	8,460	7,030	7,130	8,400
11	8,690	9,400	8,100	8,030	8,260	7,390	7,200	6,660	8,430	7,030	7,350	8,460
12	8,690	9,480	8,060	8,000	8,400	7,320	7,080	6,710	8,030	7,030	7,300	8,530
13	8,740	9,370	7,960	7,960	8,400	7,320	7,080	6,730	7,630	7,060	7,320	8,530
14	8,660	9,310	7,780	8,030	8,200	7,300	7,110	6,660	7,710	7,060	7,770	8,560
15	8,610	9,260	7,800	8,080	8,080	7,350	6,940	6,600	7,730	7,060	7,370	8,660
16	8,660	9,230	7,830	8,080	8,030	7,270	6,940	6,600	7,590	7,080	7,350	8,660
17	8,690	9,260	7,960	7,980	7,930	7,180	7,130	6,660	7,590	7,030	7,320	8,740
18	8,710	9,000	8,180	7,960	7,900	7,150	7,150	6,660	7,420	7,080	7,420	8,740
19	8,690	8,660	8,280	7,960	7,900	7,080	7,080	6,900	7,440	7,130	7,420	8,640
20	8,660	8,560	8,330	7,980	7,880	6,940	7,300	6,830	7,490	7,150	7,440	8,610
21	8,660	8,640	8,300	7,980	7,880	7,130	7,130	6,710	7,540	7,030	7,350	8,660
22	8,660	8,640	8,300	8,030	7,930	7,230	6,870	6,640	7,490	7,030	7,470	8,610
23	8,660	8,380	8,360	8,030	8,030	7,180	6,710	6,600	7,440	7,060	7,680	8,710
24	8,690	8,280	8,430	8,080	8,260	7,180	6,990	6,530	7,320	7,080	7,680	8,820
25	8,710	8,260	8,460	8,080	8,260	7,060	7,470	6,600	7,150	7,110	7,780	8,870
26	8,770	8,430	8,360	8,130	8,060	6,920	7,110	6,730	7,200	7,180	7,900	8,820
27	8,840	8,360	8,430	8,100	7,860	6,760	6,830	6,870	7,130	7,270	7,780	8,840
28	8,790	8,400	8,400	8,030	7,730	6,710	6,730	6,940	7,130	7,420	7,780	8,790
29	8,820	8,400	8,360	7,980	-	6,660	6,690	7,080	7,350	7,490	7,900	8,770
30	8,790	8,380	8,330	7,960	-	6,780	6,570	7,270	7,390	7,510	7,980	8,770
31	8,770	-	8,330	7,960	-	6,940	-	7,390	-	7,760	8,100	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						270,530	8,950	8,610	8,727	536,600		
November.....						263,320	9,480	8,280	8,794	523,300		
December.....						255,230	8,460	7,780	8,233	506,200		
Calendar year 1940.....						2,879,530	10,600	6,370	7,868	5,712,000		
January.....						248,050	8,130	7,780	8,002	492,000		
February.....						225,170	8,400	7,730	8,042	446,800		
March.....						225,590	7,930	6,660	7,277	447,500		
April.....						208,810	7,470	6,570	6,960	414,200		
May.....						209,160	7,390	6,500	6,747	414,900		
June.....						229,830	8,710	7,150	7,661	455,900		
July.....						222,650	7,760	7,030	7,182	441,600		
August.....						231,510	8,100	7,110	7,468	459,200		
September.....						255,990	8,870	8,030	8,530	507,600		
Water year 1940-41.....						2,846,240	9,480	6,500	7,798	5,646,000		

## Snake River near Murphy, Idaho

Location.- Water-stage recorder, lat. 43°18', long. 116°26', in NE¼ sec. 35, T. 1 S., R. 1 W., 4½ miles downstream from Swan Falls power plant and 7½ miles northeast of Murphy.

Drainage area.- 41,900 square miles.

Records available.- August to October 1912, August 1913 to September 1941.

Average discharge.- 28 years (1913-41), 10,590 second-feet.

Extremes.- Maximum discharge during year, 10,800 second-feet Aug. 11 (gage height, 5.15 feet); minimum, 6,230 second-feet Aug. 11 (gage height, 3.54 feet).  
1912-41: Maximum discharge, 47,300 second-feet June 22, 1918 (gage height, 13.95 feet, site and datum then in use); minimum observed, 3,950 second-feet (discharge measurement) July 20, 1934, when stage was below intake pipe.

Remarks.- Records excellent except those for periods of no gage-height record, which are good. Large diurnal fluctuations of short duration are caused by operation of gates and power plant at dam. Several diversions by pumping between this station and station at King Hill.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,980		8,720	8,690	8,460	8,140	7,500	7,200	7,780	7,360	8,090	8,200
2	9,040		8,720	8,520	8,370	8,200	7,470	7,170	7,860	7,250	7,810	8,260
3			8,690	8,370	8,340	8,280	7,410	7,300	7,920	7,410	7,830	8,290
4	a9,100		8,630	8,230	8,340	8,520	7,390	7,410	7,890	7,110	7,810	8,200
5		a9,000	8,600	8,370	8,400	8,230	7,560	7,410	7,950	7,140	7,670	8,230
6			8,630	8,460	8,340	8,140	7,220	7,470	7,950	7,140	7,810	8,340
7			8,690	8,490	8,370	8,170	7,220	7,410	8,340	7,140	7,550	8,340
8			8,630	8,520	8,600	8,060	7,410	7,300	8,400	7,110	7,640	8,490
9			8,660	8,560	8,630	8,000	7,220	7,410	8,950	7,280	7,530	8,430
10			8,660	8,600	8,550	7,950	7,280	7,680	9,330	7,010	7,610	8,520
11			8,630	8,600	8,520	7,920	7,300	7,610	9,330	7,030	7,860	8,600
12			8,550	8,520	8,600	7,890	7,670	7,530	8,950	7,090	8,690	8,630
13			8,430	8,490	8,920	7,810	7,410	7,670	8,680	7,030	8,260	8,600
14			8,430	8,580	8,920	7,780	7,670	7,810	8,400	7,110	7,890	8,780
15			8,260	8,520	8,660	7,780	7,530	7,720	8,090	7,010	8,000	8,780
16			8,260	8,660	8,520	7,860	7,360	7,530	8,170	7,090	7,950	8,920
17			8,370	8,560	8,430	7,810	7,280	7,410	7,950	7,200	8,000	8,870
18			8,260	8,460	8,370	7,670	7,550	7,090	7,860	7,060	7,810	8,900
19			8,660	8,520	8,290	7,610	7,530	7,280	7,750	7,170	7,890	8,900
20		9,390	8,720	8,490	8,340	7,530	7,470	7,440	7,690	7,200	7,810	8,950
21		9,010										
22		8,810	8,870	8,520	8,340	7,580	7,470	7,390	7,750	7,250	7,830	8,580
23		8,870	8,750	8,580	8,340	7,580	7,500	7,250	7,720	7,280	7,750	8,600
24		8,010	8,690	8,550	8,400	7,550	7,220	7,110	7,550	7,220	7,750	8,840
25		8,750	8,750	8,550	8,490	7,640	8,380	7,140	7,530	7,220	7,320	
26		8,630	8,810	8,600	8,660	7,670	7,110	7,170	7,280	7,280	7,830	
27												
28		8,660	8,870	8,580	8,750	7,580	7,670	7,280	7,220	7,300	8,000	a8,900
29		8,870	8,780	8,630	8,520	7,410	7,410	7,440	7,280	7,410	8,140	
30		8,690	8,870	8,630	8,370	7,200	7,250	7,500	7,360	7,690	8,060	
31		8,690	8,810	8,550	-	7,200	7,200	7,500	7,360	7,870	7,890	
		8,750	8,750	8,550	-	7,250	7,200	7,550	7,250	7,640	8,060	8,840
		-	8,780	8,470	-	7,300	-	7,720	-	7,560	8,110	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						275,320	-	-	8,881	546,100		
November.....						273,130	8,870	8,630	9,104	541,700		
December.....						267,960	-	8,260	8,644	531,500		
Calendar year 1940.....						3,037,800	11,300	6,680	8,300	8,025,000		
January.....						264,330	8,690	8,230	8,527	524,300		
February.....						237,540	8,920	8,290	8,494	471,700		
March.....						241,350	8,520	7,200	7,785	478,700		
April.....						221,200	7,670	6,880	7,373	438,700		
May.....						229,800	7,810	7,090	7,413	455,800		
June.....						239,470	9,330	7,220	7,982	475,000		
July.....						224,760	7,860	7,010	7,250	445,500		
August.....						244,650	8,690	7,530	7,898	485,700		
September.....						259,490	-	8,200	8,650	514,700		
Water year 1940-41.....						2,979,500	-	7,010	8,163	5,910,000		

a No gage-height record; discharge computed on basis of records for station at King Hill.

## Snake River at Weiser, Idaho

Location.- Water-stage recorder, lat. 44°15', long. 116°59', in sec. 31, T. 11 N., R. 5 W., a third of a mile upstream from highway bridge at Weiser. Datum of gage is 2,087.09 feet above mean sea level, datum of 1929.

Records available.- October 1910 to September 1941. Fragmentary gage-height record obtained by U. S. Weather Bureau since 1895.

Average discharge.- 30 years (1911-41), 17,250 second-feet.

Extremes.- Maximum discharge during year, 28,000 second-feet June 9 (gage height, 6.74 feet); minimum, 7,880 second-feet July 16 (gage height, 2.42 feet).  
1910-41: Maximum discharge observed, 83,100 second-feet May 23, 1921 (gage height, 13.60 feet); minimum observed, 5,100 second-feet Aug. 5, 1924 (gage height, 1.35 feet).  
Flood of Mar. 3, 1910, reached a stage of 15.7 feet on old Weather Bureau gage (discharge about 100,000 second-feet), but flood of June 1894 was considerably higher.

Remarks.- Records excellent. Flow regulated by reservoirs above station and by Swan Falls power plant. Some diversions below Murphy for irrigation.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,400	13,500	13,300	13,100	12,800	21,400	18,900	14,300	23,600	12,700	9,710	10,300
2	13,000	15,000	12,900	12,400	12,600	25,000	20,600	14,900	22,800	12,300	9,640	10,600
3	13,100	15,500	13,000	12,000	12,600	24,800	19,200	15,400	22,100	11,900	9,600	10,800
4	13,100	14,900	12,700	11,600	12,400	21,800	18,800	17,200	21,300	11,500	9,580	11,000
5	13,300	14,300	12,600	11,600	12,200	19,800	20,000	18,100	20,800	10,800	9,190	10,900
6	12,800	13,800	12,600	11,800	12,200	19,000	22,300	18,500	20,200	10,300	9,050	10,900
7	12,600	13,600	12,500	12,000	12,500	18,800	21,000	17,900	20,900	9,900	9,120	10,800
8	12,300	13,900	12,600	12,000	13,000	18,100	20,300	17,200	24,800	9,340	8,730	10,800
9	12,100	13,800	12,600	12,000	13,400	17,500	20,300	17,100	27,600	8,760	8,760	10,900
10	12,000	13,700	12,400	11,800	13,500	17,200	19,200	16,700	26,800	8,690	8,760	11,000
11	11,900	13,800	12,000	11,600	17,100	16,700	20,600	16,500	25,100	8,440	9,160	11,000
12	11,800	13,600	11,600	11,500	20,300	16,400	21,000	17,000	23,900	8,230	10,500	10,900
13	11,600	13,400	11,000	11,600	19,600	15,700	19,400	18,200	22,500	8,260	10,900	11,100
14	11,500	13,200	10,800	11,900	17,200	15,100	19,900	20,300	21,000	8,230	10,800	11,100
15	11,500	12,900	10,800	12,200	16,200	14,600	20,000	21,000	20,300	8,090	10,300	11,300
16	11,400	12,700	10,800	12,200	15,200	14,400	18,000	22,100	19,400	8,090	10,400	11,300
17	11,200	12,900	11,200	12,100	14,600	14,800	17,200	21,000	18,400	8,090	10,100	11,400
18	11,300	13,100	11,500	12,000	13,900	15,300	16,400	20,600	17,400	8,230	10,400	11,400
19	11,400	13,100	11,700	12,000	13,400	16,400	18,800	20,100	18,600	8,230	10,600	11,400
20	11,300	13,000	12,400	12,200	13,600	17,100	14,400	19,100	20,400	8,300	10,300	11,500
21	11,400	12,500	12,600	12,300	13,700	17,000	13,700	18,200	19,400	8,340	10,300	11,500
22	11,400	12,000	12,800	12,600	14,700	16,700	13,000	17,000	18,600	8,400	10,100	11,400
23	11,600	12,000	13,000	12,600	15,600	16,500	12,700	16,600	17,500	8,440	9,970	11,600
24	12,000	12,200	14,200	13,000	18,300	16,200	12,200	17,100	15,900	8,300	9,670	11,700
25	12,400	12,100	14,500	14,900	22,100	15,600	12,000	19,400	14,600	8,340	9,860	11,600
26	13,600	12,000	14,300	20,100	19,600	15,700	12,000	21,000	13,300	8,440	10,000	11,600
27	14,300	12,000	17,700	17,600	17,400	16,100	12,800	21,700	12,600	8,830	10,100	11,700
28	14,000	12,200	17,000	15,700	16,800	16,400	13,400	24,200	12,700	9,490	10,100	11,600
29	13,300	12,400	14,800	14,200	-	16,500	12,300	24,100	13,500	10,000	10,100	11,600
30	13,200	13,300	13,600	13,400	-	17,400	13,300	22,900	13,200	9,750	10,000	11,500
31	13,300	-	13,300	13,100	-	18,400	-	23,300	-	9,900	10,100	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						382,100	14,300	11,200	12,350	767,900		
November.....						395,700	15,800	12,000	13,280	786,800		
December.....						398,800	17,700	10,800	12,860	791,000		
Calendar year 1940.....						5,445,220	48,400	7,950	14,880	10,800,000		
January.....						399,000	20,100	11,500	12,870	791,400		
February.....						426,500	22,100	12,200	15,230	846,000		
March.....						542,400	25,000	14,400	17,020	1,076,000		
April.....						510,700	22,300	12,000	17,080	1,013,000		
May.....						588,700	24,200	14,300	18,980	1,168,000		
June.....						589,100	27,600	12,600	19,640	1,168,000		
July.....						286,610	12,700	8,090	9,245	568,500		
August.....						305,800	10,900	8,730	9,865	606,500		
September.....						336,200	11,700	10,300	11,210	666,800		
Water year 1940-41.....						5,162,610	27,600	8,090	14,140	10,240,000		

## SNAKE RIVER MAIN STEM

Snake River at Oxbow, Oreg.

Location.- Water-stage recorder, lat. 44°57', long. 116°51', in NW¼ sec. 16, T. 7 S., R. 48 E., at Oxbow, five-eighths of a mile upstream from intake of diversion tunnel for Oxbow power plant.

Records available.- May 1923 to September 1941.

Average discharge.- 18 years, 15,710 second-feet.

Extremes.- Maximum discharge during year, 29,300 second-feet June 9 (gage height, 12.97 feet); minimum, 8,320 second-feet July 17 (gage height, 7.62 feet).  
1923-41: Maximum discharge, 72,800 second-feet May 4, 1938 (gage height, 20.25 feet); minimum, 4,890 second-feet Aug. 6, 1924 (gage height, 6.30 feet).

Remarks.- Records excellent. Flow regulated by irrigation, reservoirs, and power plants above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

7.6	8,270	9.6	14,790	11.6	22,870
7.9	9,080	10.0	16,310	12.0	24,650
8.2	9,950	10.4	17,880	12.4	26,610
8.5	10,890	10.8	19,500	12.8	28,450
8.8	11,900	11.2	21,160	13.2	30,470
9.2	13,320				

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12,900	14,200	14,000	13,700	13,600	21,000	20,900	15,900	24,600	14,900	10,000	10,600
2	13,300	15,000	13,800	13,200	13,300	26,700	21,500	17,100	24,500	14,500	9,920	10,900
3	13,900	16,600	13,600	12,500	13,200	28,200	22,500	18,000	23,900	14,000	9,890	11,300
4	13,900	16,600	13,400	12,200	13,200	28,600	21,400	18,900	23,000	13,400	9,710	11,400
5	13,900	16,600	13,200	12,000	12,900	23,200	21,900	20,300	22,600	12,900	9,500	11,500
6												
7	13,700	15,000	13,200	11,900	12,700	21,900	23,700	20,600	22,100	11,900	9,360	11,300
8	13,200	14,500	13,000	12,200	13,200	21,100	24,400	20,600	23,500	11,400	9,300	11,200
9	13,100	14,600	12,900	12,300	13,500	21,100	22,400	19,900	24,600	10,800	9,160	11,100
10	12,700	14,800	13,100	12,200	14,200	20,200	22,800	19,300	28,300	10,100	8,830	11,200
11	12,400	14,600	12,800	12,100	14,300	19,800	21,900	19,300	29,000	9,630	8,910	11,300
12												
13	12,400	14,500	12,500	11,900	16,000	19,300	21,700	18,900	27,800	9,360	8,940	11,300
14	12,300	14,500	12,100	11,500	20,600	18,500	23,100	19,500	26,500	8,970	9,860	11,200
15	12,100	14,100	11,500	11,800	21,000	18,200	22,100	20,200	25,400	8,760	10,500	11,400
16	11,900	14,000	11,100	12,100	19,400	17,400	21,400	21,600	24,200	8,770	11,200	11,400
17	11,900	13,800	11,000	12,300	17,600	16,800	22,100	22,800	23,000	8,660	10,900	11,500
18												
19	12,100	13,500	10,800	12,600	16,700	16,400	21,200	23,400	22,200	8,660	10,500	11,700
20	11,700	13,400	11,100	12,500	16,700	16,500	19,700	23,500	21,200	8,450	10,400	11,700
21	11,600	13,600	11,600	12,600	15,300	17,200	19,000	22,500	20,600	8,480	10,400	11,700
22	11,700	13,700	11,900	12,500	14,500	17,700	18,200	22,100	19,500	8,640	10,800	11,800
23	11,700	13,700	12,800	12,600	14,300	16,600	17,400	21,200	21,500	8,610	10,800	11,900
24												
25	11,600	13,500	13,000	12,900	14,600	18,900	16,000	20,600	22,100	8,610	10,700	11,800
26	11,700	12,900	13,100	12,900	15,100	18,700	16,300	19,500	21,000	8,640	10,500	11,800
27	11,900	12,600	13,400	13,000	16,300	18,500	14,800	18,800	20,300	8,610	10,400	11,600
28	12,200	12,600	14,200	13,500	17,500	18,200	14,400	18,500	18,900	8,660	10,100	11,900
29	13,100	12,800	14,500	14,500	22,100	17,800	14,000	20,000	17,300	8,690	9,980	11,900
30												
31	13,400	12,600	14,900	18,400	22,200	17,500	13,700	22,000	15,900	8,660	10,300	11,800
	14,600	12,600	16,200	20,000	19,400	17,800	14,000	22,500	14,700	8,910	10,400	11,800
	15,300	12,500	19,400	17,400	18,500	18,100	16,100	24,200	14,600	9,280	10,500	11,900
	14,400	12,900	16,200	15,500	-	18,300	16,100	25,300	15,200	10,200	10,600	11,700
	14,200	13,300	14,900	14,600	-	18,800	14,800	24,500	15,500	10,500	10,500	11,800
	14,000	-	13,700	14,000	-	19,900	-	24,300	-	10,100	10,400	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	398,700		15,300		11,600		12,860		790,800			
November.....	418,700		16,600		12,500		13,960		830,500			
December.....	412,500		19,400		10,800		15,310		818,200			
Calendar year 1940.....	5,710,920		49,400		8,000		15,600		11,330,000			
January.....	413,800		20,000		11,800		13,360		820,800			
February.....	450,800		22,200		12,700		16,100		894,100			
March.....	609,100		28,200		16,400		19,650		1,208,000			
April.....	577,100		24,400		13,700		19,240		1,145,000			
May.....	646,100		25,300		15,900		20,840		1,282,000			
June.....	652,700		29,000		14,600		21,760		1,295,000			
July.....	311,030		14,900		8,450		10,030		616,900			
August.....	313,560		11,200		8,830		10,110		621,900			
September.....	345,300		11,900		10,600		11,510		684,900			
Water year 1940-41.....	5,549,390		29,000		8,450		15,200		11,010,000			

a No gage-height record; discharge interpolated.

## Snake River near Clarkston, Wash.

Location.- Water-stage recorder, lat. 46°25'30", long. 117°10'30", in lot 1, sec. 16, T. 11 N., R. 45 E., 2 miles upstream from Alpowa Creek, 7 miles downstream from Clarkston, and 154 miles upstream from mouth. Datum of gage is 670 feet above mean sea level (Corps of Engineers, U. S. Army, bench mark).

Drainage area.- 103,200 square miles.

Records available.- October 1935 to September 1941, October 1915 to September 1922, August 1923 to September 1935, at site at Riparia, 86 miles downstream, published as Snake River at Riparia, Wash; all in reports of Geological Survey. October 1909 to September 1933 (at site at Riparia) in State Water-Supply Bulletin 5.

Average discharge.- 32 years (1909-41), 47,360 second-feet.

Extremes.- Maximum discharge during year, 102,000 second-feet May 14 (gage height, 22.90 feet); minimum, 14,100 second-feet Dec. 16 (gage height, 9.45 feet).

1909-41: Maximum discharge observed, 270,000 second-feet May 20, 1921 (gage height, 19.0 feet, site and datum then in use); minimum observed (revised), 10,600 second-feet Aug. 14, 18, 20, 24-28, 30, 31, Sept. 1, 2, 5, 1931 but may have been less during period of ice effect in January 1937.

Maximum stage known, 24.7 feet, at Riparia, June 5, 1894, determined from floodmarks by U. S. Weather Bureau (discharge, 409,000 second-feet).

Revisions.- The figure of minimum discharge for water year 1937 as published in Water-Supply Paper 833 is probably too low. The minimum daily discharge for that year has been revised to 10,800 second-feet on Jan. 10.

Remarks.- Records excellent except those for periods of ice effect, which are fair. Small diversions by pumping between this station and the station at Oxbow. Large diurnal fluctuation caused by power plant on Clearwater River above Lewiston, Idaho.

Revisions.- Revised figures of discharge for the water year 1937, superseding those published in Water-Supply Paper 833, are given herein.

Discharge, in second-feet, water year October 1936 to September 1937

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,100	17,200	14,500	15,500	b17,600	19,800	32,300	52,500	81,100	36,800	16,700	13,900
2	16,200	17,500	14,100	14,500	b17,300	20,100	39,900	53,400	79,100	34,200	16,500	13,800
3	15,900	17,400	16,300	13,500	b17,600	20,800	42,200	63,700	81,000	32,000	17,900	14,100
4	16,100	16,900	18,300	14,300	18,200	22,100	40,700	79,600	81,800	30,800	17,300	14,200
5	16,500	16,400	17,500	14,200	18,300	22,800	39,500	91,900	75,600	28,900	16,600	14,600
6	15,600	17,100	17,500	b14,400	19,400	23,700	40,500	93,200	69,100	27,100	16,200	14,800
7	15,200	18,000	17,900	b13,700	19,000	23,600	39,200	99,000	64,700	25,900	15,900	15,200
8	15,900	18,500	18,100	b12,200	18,500	23,600	39,600	98,300	61,500	26,700	15,200	14,900
9	16,000	17,900	19,000	b11,400	18,600	25,600	38,700	86,500	61,900	24,500	15,600	14,900
10	15,800	17,600	18,900	b10,800	17,900	24,100	38,600	88,600	66,200	23,600	15,200	14,800
11	16,400	16,400	18,400	b11,400	17,700	25,100	36,800	99,700	71,700	22,700	15,300	14,600
12	16,500	17,100	17,500	11,800	18,200	27,400	36,800	90,500	65,600	21,800	15,500	14,300
13	15,700	16,900	17,100	12,700	17,500	30,400	37,200	97,400	64,400	21,100	15,100	14,000
14	16,400	17,100	16,800	12,600	17,500	31,200	53,300	94,400	61,600	20,900	14,800	14,300
15	16,200	17,800	16,500	13,900	17,800	31,900	70,000	103,000	59,900	20,500	14,500	13,900
16	18,100	17,400	16,600	15,500	18,000	34,900	74,300	104,000	58,800	20,200	14,400	13,800
17	16,900	17,500	16,900	b16,100	18,300	37,700	76,100	104,000	59,700	20,300	14,000	13,800
18	16,800	17,700	17,200	b17,300	17,400	39,400	66,900	106,000	58,800	19,600	14,400	13,900
19	17,300	18,300	17,200	b17,600	17,200	37,200	59,600	110,000	57,600	19,100	13,900	13,700
20	18,800	17,800	18,100	b18,800	17,300	34,400	56,200	110,000	59,800	18,500	15,900	13,800
21	17,200	17,900	17,700	b18,400	16,900	29,800	61,100	103,000	69,800	18,300	13,500	14,100
22	17,100	17,100	17,500	b18,000	17,300	27,900	64,500	97,600	66,900	18,200	13,500	14,200
23	17,000	17,400	17,600	b17,300	17,400	26,700	56,500	97,700	65,100	17,700	13,400	14,200
24	16,800	17,100	18,400	b16,500	17,600	28,900	61,100	93,800	60,400	17,000	13,900	15,300
25	17,200	16,600	19,000	b15,800	18,000	25,800	47,500	99,800	54,900	16,900	13,600	16,000
26	17,800	15,800	18,600	b15,100	18,300	25,900	47,100	106,000	52,000	16,700	14,400	13,600
27	17,300	15,700	17,800	b15,100	18,700	26,100	52,700	108,000	44,700	17,400	13,700	15,200
28	17,200	15,400	17,400	15,400	19,000	26,300	59,300	109,000	45,100	18,400	13,400	15,300
29	17,200	14,400	17,200	15,900	-	27,700	63,000	106,000	40,200	18,800	13,500	15,400
30	17,100	15,000	16,800	16,300	-	28,700	56,600	94,800	38,100	17,700	13,900	15,400
31	16,600	-	16,200	b17,600	-	30,100	-	85,800	-	17,000	13,500	-

b Stage-discharge relation affected by ice.

## SNAKE RIVER MAIN STEM

Discharge, in second-feet, of Snake River near Clarkston, Wash.,  
water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23,500	24,400	33,300	26,200	25,500	32,800	46,000	60,400	87,300	52,100	21,400	20,200
2	24,800	25,300	31,200	24,400	25,300	41,700	48,600	70,000	90,000	48,000	20,600	19,400
3	25,800	27,700	29,200	22,200	24,800	52,800	53,500	73,200	83,700	46,000	20,200	19,800
4	31,700	29,700	28,700	20,200	24,800	50,700	54,900	75,600	81,000	44,100	19,800	20,800
5	31,200	28,200	29,700	20,200	23,900	47,400	52,100	77,400	79,200	42,300	19,400	21,400
6	28,700	26,700	29,700	21,800	23,500	43,500	52,800	77,400	76,500	39,900	18,700	22,600
7	26,700	25,300	29,700	22,200	23,500	41,100	52,800	71,600	76,500	37,700	18,300	23,100
8	24,800	25,800	28,200	23,100	23,900	39,900	50,700	66,800	91,800	36,000	17,900	22,200
9	23,900	27,200	27,200	22,600	24,400	39,400	48,000	65,200	98,500	33,800	17,900	21,800
10	22,600	26,700	27,200	22,200	25,500	38,200	49,300	62,000	95,500	31,700	16,800	21,400
11	22,200	26,200	25,300	21,400	27,200	37,700	51,400	61,200	89,100	29,700	17,200	22,600
12	21,400	25,300	25,500	20,600	30,700	36,000	53,500	66,800	93,700	28,700	17,900	22,800
13	21,400	23,900	20,600	20,200	35,600	34,400	53,500	81,900	80,100	27,200	18,700	22,200
14	21,000	22,200	17,900	20,600	34,400	33,300	51,400	102,000	78,300	26,200	20,200	23,900
15	20,600	21,800	15,800	22,200	32,500	31,700	50,000	95,500	77,400	25,300	21,000	23,900
16	20,600	21,800	15,500	22,200	29,700	30,700	50,700	88,200	73,200	24,400	20,200	26,700
17	20,200	22,200	16,800	22,600	28,200	30,700	48,000	86,400	69,200	23,500	19,800	25,800
18	19,800	22,600	18,300	23,900	26,700	31,200	45,400	90,000	68,400	22,600	19,000	24,800
19	19,400	23,100	22,600	25,700	25,800	35,800	43,500	85,500	71,600	22,200	19,000	24,400
20	19,000	23,900	23,900	29,200	25,500	34,400	41,100	78,300	81,000	22,200	19,000	24,800
21	19,400	23,100	27,700	28,200	25,500	34,900	39,900	73,200	79,200	21,800	19,400	24,400
22	19,000	22,200	29,700	27,700	25,800	34,900	38,200	71,600	70,800	21,400	19,400	23,900
23	19,400	21,400	29,700	26,700	26,200	34,900	38,200	72,400	65,200	21,000	20,200	23,500
24	19,800	21,000	29,700	26,200	28,200	34,900	39,400	75,600	61,200	20,200	19,400	23,100
25	19,800	20,200	30,700	27,200	30,200	35,800	40,500	81,900	56,400	19,800	19,000	22,600
26	22,200	21,000	31,700	31,700	34,900	33,300	41,700	86,400	58,800	19,800	19,800	22,600
27	23,900	21,000	33,800	37,100	33,800	33,300	43,500	86,400	48,600	20,200	19,800	22,200
28	24,800	21,400	37,100	35,500	31,200	34,900	47,400	87,300	48,000	20,200	20,200	22,600
29	25,800	26,700	36,500	31,700	-	36,500	51,400	83,700	52,100	21,000	20,600	22,600
30	24,400	36,000	31,700	28,700	-	39,400	54,200	81,900	54,900	22,600	20,200	22,200
31	24,400	-	28,700	26,700	-	42,900	-	83,700	-	22,200	19,400	-

Monthly discharge, in second-feet, 1936-37, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1936	513,900	17,800	15,600	16,580	1,019,000
November	510,600	18,300	14,400	17,020	1,013,000
December	538,600	19,000	14,100	17,370	1,068,000
Calendar year 1936	15,894,800	213,000	13,000	43,430	31,530,000
January 1937	463,400	18,800	10,800	14,950	919,100
February	503,000	19,400	16,900	17,960	997,700
March	854,600	39,400	19,800	27,570	1,695,000
April	1,518,300	76,100	32,800	50,610	3,012,000
May	2,890,000	110,000	52,500	93,230	5,732,000
June	1,876,100	81,900	38,100	62,500	3,719,000
July	686,800	36,200	16,700	25,150	1,352,000
August	459,000	17,900	13,400	14,810	910,400
September	434,000	16,000	13,500	14,470	860,800
Water year 1936-37	11,247,400	110,000	10,800	30,810	22,310,000
October 1940	712,200	31,700	19,000	22,970	1,413,000
November	734,000	36,000	20,200	24,470	1,456,000
December	841,300	37,100	15,600	27,140	1,659,000
Calendar year 1940	15,013,900	125,000	13,000	41,020	29,780,000
January 1941	784,100	37,100	20,200	25,290	1,555,000
February	776,100	35,500	23,500	27,720	1,539,000
March	1,156,100	52,800	30,700	37,280	2,291,000
April	1,431,600	54,900	32,800	47,720	2,840,000
May	2,420,600	102,000	60,400	75,080	4,801,000
June	2,221,200	98,500	48,000	74,040	4,406,000
July	893,800	52,100	19,800	28,830	1,773,000
August	600,400	21,400	16,800	19,370	1,191,000
September	683,100	26,700	19,400	22,770	1,355,000
Water year 1940-41	13,253,400	102,000	15,500	36,310	26,290,000



## Flat Creek near Jackson, Wyo.

Location.- Staff gage, lat. 43°33', long. 110°37', in SW¼ sec. 35, T. 42 N., R. 115 W., just downstream from power plant of Jackson Hole Light & Power Co., 9 miles northeast of Jackson. Altitude of gage, 6,750 feet (from topographic map).

Drainage area.- 40 square miles.

Records available.- June 1933 to November 1941, except winters, (discontinued).

Extremes.- 1940-41: Maximum discharge observed during water year; 222 second-feet June 19 (gage height, 1.69 feet); minimum daily observed, 14 second-feet Apr. 20.

1933-41: Maximum discharge observed, 438 second-feet June 15, 1935 (gage height, 3.48 feet, site and datum then in use); minimum observed, 7 second-feet Apr. 15-18, 1935, but may have been less during winter months, when no records were obtained.

Remarks.- Records fair.

Cooperation.- Gage-height record collected by Jackson Hole Light & Power Co. under supervision of the Geological Survey, in connection with a Federal Power Commission project.

## Discharge, in second-feet, 1940-41

Day	Oct.	Nov.		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	18	18		15	22	148	148	60	41	32	29
2	18	18		15	20	148	134	56	41	32	28
3	16	-		15	22	148	130	55	39	32	28
4	18	-		15	24	146	119	55	39	32	28
5	18	-		15	24	148	108	52	38	32	28
6	18	-		15	24	148	101	52	38	32	28
7	17	-		15	22	152	101	51	38	31	28
8	17	-		15	24	154	101	50	38	31	28
9	17	-		15	24	156	101	49	37	31	28
10	18	-		15	24	156	102	48	36	31	27
11	18	-		15	28	158	102	49	36	31	27
12	18	-		15	30	158	102	50	36	31	27
13	17	-		15	31	148	101	48	35	31	27
14	18	-		16	31	146	99	48	35	30	27
15	18	-		16	33	156	99	46	35	30	27
16	17	-		16	39	167	97	46	35	30	27
17	17	-		16	43	200	95	44	35	30	27
18	17	-		16	47	216	85	46	35	30	27
19	17	-		15	63	222	85	47	35	30	27
20	18	-		14	67	218	86	47	35	30	26
21	18	-		15	70	216	85	46	34	30	26
22	18	-		16	78	220	85	46	34	30	26
23	19	-		16	82	220	83	46	34	30	-
24	19	-		17	90	211	83	46	34	30	-
25	19	-		17	104	205	80	44	34	30	-
26	20	-		18	113	203	77	43	34	30	-
27	18	-		18	132	188	74	43	34	30	-
28	18	-		19	158	171	74	42	33	30	-
29	18	-		22	156	160	72	42	33	30	-
30	18	-		26	156	150	67	41	33	29	-
31	18	-		-	152	-	61	41	-	29	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1940 .....	555	20	17	17.9	1,100
November .....	-	-	-	-	-
December .....	-	-	-	-	-
Calendar year 1941 .....	-	-	-	-	-
January 1941 .....	-	-	-	-	-
February .....	-	-	-	-	-
March .....	-	-	-	-	-
April .....	488	26	14	16.3	988
May .....	1,933	158	20	62.4	3,830
June .....	5,237	222	146	175	10,390
July .....	2,936	148	61	94.7	5,820
August .....	1,481	60	41	47.8	2,940
September .....	1,074	41	33	36.8	2,130
Water year 1940-41 .....	-	-	-	-	-
October 1941 .....	947	32	29	30.5	1,880
November 1-22 .....	601	29	26	27.3	1,190

## Salt River near Smoot, Wyo.

Location.- Water-stage recorder, lat.  $42^{\circ}36'$ , long.  $110^{\circ}55'$ , in sec. 7, T. 30 N., R. 118 W.,  $\frac{1}{4}$  miles south of Smoot and  $\frac{1}{2}$  miles upstream from Willow Creek.

Drainage area.- 59.4 square miles.

Records available.- June 1932 to September 1941.

Extremes.- Maximum discharge during year, 169 second-feet May 14 (gage height, 2.55 feet); minimum daily, 3.3 second-feet Jan. 10-16, 18-22, Feb. 2-7, 1932-41; Maximum discharge, 430 second-feet May 15, 1936 (gage height, 3.15 feet), from rating curve extended above 200 second-feet; minimum not determined, occurred during period of ice effect.

Remarks.- Records excellent except those for period of ice effect, which are fair. A few diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2	5.2	4.4	4.0	3.4	5.4	12	97	103	38	17	13
2	6.9	6.2	4.6	3.9	3.3	5.4	13	95	102	34	16	12
3	11	6.2	5.0	3.7	3.3	5.4	13	103	102	32	16	12
4	8.6	5.8	5.1	3.6	3.3	5.4	13	108	103	31	16	13
5	8.2	6.2	5.1	3.6	3.3	5.4	13	95	116	30	14	12
6	7.2	5.8	5.2	3.6	3.3	5.4	13	92	105	29	14	12
7	6.9	5.5	5.2	3.6	3.3	5.4	12	75	102	29	14	13
8	6.5	5.5	5.0	3.5	3.4	5.4	12	68	98	30	13	13
9	6.5	5.5	4.8	3.4	3.5	5.4	12	75	111	29	17	12
10	6.2	5.5	4.5	3.3	3.6	5.4	12	90	102	28	16	12
11	5.8	5.5	4.3	3.3	4.0	5.4	12	108	94	29	19	11
12	6.2	5.4	4.0	3.3	4.1	5.4	12	137	94	30	19	11
13	*5.8	5.3	3.9	3.3	4.1	5.4	9.6	158	98	29	17	10
14	5.8	5.2	3.9	3.3	4.3	5.4	9.6	165	102	28	16	10
15	5.8	5.2	4.0	3.3	4.4	5.4	9.6	151	106	26	16	10
16	5.8	5.4	4.1	3.3	4.6	5.5	9.6	132	102	24	17	9.6
17	5.8	5.4	4.3	3.4	4.4	5.6	9.6	125	92	23	22	9.6
18	5.5	5.4	4.4	3.3	4.6	5.8	9.6	139	95	22	20	9.6
19	5.5	5.3	4.5	3.3	4.8	6.0	9.6	128	92	24	18	9.6
20	5.5	5.2	4.5	3.3	*4.9	6.4	9.6	116	89	25	17	9.1
21	5.5	5.2	4.5	3.3	5.0	6.8	10	116	87	22	16	9.1
22	5.5	5.0	4.3	*3.3	5.2	7.2	13	123	82	20	16	9.6
23	5.5	4.9	4.4	3.4	5.2	8.0	17	128	73	19	16	9.6
24	5.2	4.9	4.5	3.5	5.2	8.2	22	139	69	19	16	8.6
25	5.2	4.9	4.4	3.6	5.2	8.2	29	139	62	20	16	8.6
26	5.2	4.9	4.3	3.6	5.2	8.4	35	139	54	20	16	8.6
27	6.5	4.8	4.2	3.6	5.2	9.0	42	147	50	19	15	12
28	6.2	4.6	4.3	3.7	5.2	9.4	69	140	46	17	14	10
29	5.8	4.5	4.2	3.6	-	10	89	123	45	17	13	8.6
30	5.8	4.4	4.5	3.5	-	11	89	115	43	17	13	7.7
31	5.8	-	4.4	3.5	-	12	-	110	-	17	13	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						195.9	11	5.2	6.32	389		
November.....						188.8	6.2	4.4	5.29	315		
December.....						138.8	5.2	3.9	4.48	275		
Calendar year 1940.....						5,746.9	101	3.6	15.7	11,400		
January.....						107.9	4.0	3.3	3.48	214		
February.....						119.3	5.2	3.3	4.26	237		
March.....						206.5	12	5.4	6.73	414		
April.....						640.8	89	9.6	21.4	1,270		
May.....						3,856	165	68	118	7,280		
June.....						2,619	116	43	87.3	5,190		
July.....						777	38	17	25.1	1,540		
August.....						497	22	13	16.0	986		
September.....						315.9	13	7.7	10.5	627		
Water year 1940-41.....						9,434.9	165	3.3	25.8	18,710		

\* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 10 to Apr. 7.

## Salt River at Wyoming-Idaho State line

Location.- Water-stage recorder, lat. 43°10', long. 111°04', in sec. 16, T. 3 S., R. 46 E., just downstream from Trout Creek, half a mile upstream from mouth, and three-quarters of a mile west of Wyoming-Idaho State line.

Drainage area.- 890 square miles.

Records available.- April 1934 to September 1941. July 1917 to September 1918 at site 4 miles upstream, records not equivalent.

Extremes.- Maximum discharge during year, 1,130 second-feet May 14 (gage height, 2.92 feet); minimum daily, 295 second-feet Feb. 3.  
1934-41: Maximum discharge, 3,520 second-feet May 6, 1936 (gage height, 4.64 feet); minimum, 216 second-feet May 17, 1934 (gage height, 1.30 feet).

Remarks.- Records good except those for period of ice effect, which are fair. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	468	510	420	410	315	330	768	919	849	722	575	612
2	474	516	462	350	300	338	866	919	814	742	575	612
3	492	540	498	335	295	342	866	956	780	722	563	616
4	504	534	486	340	300	350	810	996	774	716	557	624
5	468	522	486	355	305	354	901	985	800	722	557	612
6	462	510	456	350	306	346	887	956	800	690	551	605
7	450	528	474	346	303	342	761	912	794	696	551	618
8	450	534	474	350	310	342	728	905	800	716	539	612
9	474	534	474	346	330	342	742	912	814	702	569	612
10	468	528	450	330	342	334	754	919	856	690	575	599
11	466	516	438	310	342	334	754	956	835	690	605	587
12	450	504	420	300	342	334	748	1,000	800	702	612	581
13	450	474	385	310	327	338	754	1,060	807	690	605	581
14	444	462	395	310	324	330	787	1,100	807	670	599	575
15	450	474	400	315	321	334	761	1,090	849	670	593	575
16	444	474	410	315	327	334	722	996	870	650	593	575
17	435	466	430	312	321	350	702	935	849	618	605	569
18	444	480	456	324	324	370	687	898	821	612	650	575
19	438	474	456	324	*327	380	650	853	774	615	670	581
20	432	468	438	324	327	400	676	814	735	657	650	563
21	438	456	438	*324	327	426	683	768	722	670	644	557
22	432	450	426	327	327	462	683	722	690	664	644	557
23	432	438	438	327	327	480	676	696	676	644	631	563
24	432	410	438	324	350	480	683	696	664	631	624	575
25	438	450	420	321	334	456	696	702	657	624	618	599
26	444	426	415	321	330	492	735	754	644	638	631	587
27	450	410	432	321	330	534	774	856	638	638	631	599
28	498	426	426	318	330	564	821	940	638	631	605	593
29	504	426	432	306	-	600	870	926	683	612	593	581
30	516	432	444	309	-	663	905	898	748	612	581	587
31	516	-	420	320	-	733	-	863	-	605	593	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	14,286	516	432	461	28,340
November.....	14,392	540	410	480	28,550
December.....	13,667	496	365	441	27,110
Calendar year 1940.....	167,823	782	327	459	332,900
January.....	10,174	410	300	328	20,180
February.....	9,023	342	295	322	17,900
March.....	12,844	733	330	414	25,480
April.....	22,020	905	650	761	45,260
May.....	27,913	1,100	696	900	55,360
June.....	22,958	870	638	766	45,600
July.....	20,664	742	605	667	40,990
August.....	18,589	670	559	600	36,870
September.....	17,684	624	557	589	35,080
Water year 1940-41.....	205,044	1,100	295	562	406,700

\* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 12-17, Jan. 2-6, 11-14, 31, Feb. 1-5, 8, 9.

## Cottonwood Creek near Smoot, Wyo.

Location.- Water-stage recorder, lat. 42°37', long. 110°53', in sec. 4, T. 30 N., R. 118 W., 1½ miles downstream from Porcupine Creek and 1½ miles southeast of Smoot.

Drainage area.- 26.3 square miles (revised).

Records available.- May 1933 to September 1941.

Extremes.- Maximum discharge during year, 174 second-feet May 26 (gage height, 2.07 feet); minimum daily, 9.8 second-feet Mar. 12-15.

1933-41: Maximum discharge observed, 424 second-feet June 17, 18, 1933 (gage height, 2.76 feet, datum then in use), from rating curve extended above 200 second-feet; minimum daily, 8.5 second-feet Feb. 28 to Mar. 2, 1935.

Remarks.- Records good except those for periods of ice effect, which are fair. One small diversion above station. Flow regulated by Cottonwood Lake.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	17	15	12	10	10	14	39	125	88	34	27
2	22	17	15	11	11	10	15	44	125	85	33	26
3	23	17	15	11	11	10	14	48	128	81	36	27
4	21	15	14	13	11	10	13	51	132	79	40	26
5	20	15	15	13	11	10	14	50	144	77	40	26
6	20	15	15	12	11	10	14	47	139	75	44	26
7	20	15	14	12	11	10	14	44	139	72	41	25
8	20	15	14	12	11	10	14	42	134	67	52	25
9	19	15	14	12	11	10	14	41	137	66	57	25
10	18	15	15	12	11	11	14	46	132	67	51	24
11	18	15	16	12	11	10	14	53	128	67	45	24
12	18	15	13	12	12	9.8	15	67	128	67	40	23
13	18	15	13	12	12	9.8	15	86	132	66	34	23
14	18	15	13	12	12	9.8	15	108	139	64	33	22
15	18	15	12	12	12	9.8	15	106	146	60	32	22
16	18	15	12	12	11	10	16	92	151	56	32	22
17	18	15	12	12	10	10	16	92	151	51	32	22
18	18	15	13	12	10	10	16	104	154	51	31	22
19	18	15	13	12	10	11	16	104	151	52	31	22
20	18	15	14	12	*10	11	16	96	146	52	31	21
21	18	15	14	*12	10	11	16	98	145	52	31	21
22	18	15	13	12	10	11	16	108	132	51	31	20
23	18	15	13	12	10	11	18	125	103	52	31	20
24	18	15	13	12	10	11	19	144	103	51	31	19
25	18	15	13	12	11	11	21	154	111	51	31	19
26	18	15	13	12	11	11	22	161	125	51	31	19
27	19	15	13	12	11	11	24	169	120	48	30	19
28	19	15	13	12	11	11	28	161	114	47	29	19
29	18	15	14	12	-	12	32	146	100	40	28	19
30	18	15	13	12	-	12	36	139	92	35	28	19
31	18	-	13	12	-	13	-	130	-	35	27	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						586	23	18	18.9	1,160		
November.....						456	17	15	15.2	904		
December.....						422	16	12	13.6	837		
Calendar year 1940.....						11,626	135	11	31.8	23,050		
January.....						372	13	11	12.0	738		
February.....						303	12	10	10.8	601		
March.....						327.2	13	9.8	10.6	649		
April.....						526	36	13	17.5	1,040		
May.....						2,895	169	39	93.4	5,740		
June.....						3,906	154	92	130	7,750		
July.....						1,856	88	35	59.9	3,680		
August.....						1,097	57	27	35.4	2,180		
September.....						675	27	19	22.5	1,340		
Water year 1940-41 .....						13,421.2	169	9.8	36.8	26,820		

\* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 13, 23, 24, Dec. 14-25, Jan. 1-5, Feb. 1-10, 17.

## Strawberry Creek near Bedford, Wyo.

Location.- Water-stage recorder, lat.  $42^{\circ}57'$ , long.  $110^{\circ}54'$ , in sec. 27, T. 34 N., R. 118 W., at mouth of canyon,  $1\frac{1}{2}$  miles east of Bedford.

Drainage area.- 21.3 square miles.

Records available.- June 1932 to September 1941.

Extremes.- Maximum discharge during year, 238 second-feet May 27 (gage height, 3.22 feet); minimum daily, 26 second-feet Mar. 1-24.

1932-41: Maximum discharge observed, 675 second-feet June 25, 1932 (gage height, 3.00 feet, site and datum then in use), from rating curve extended above 300 second-feet; minimum not determined.

Remarks.- Records good except those for period of no gage-height record, which are fair.  
One small diversion above station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	41	37	30	27	26	29	50	157	90	72	60
2	45	41	37	30	27	26	29	55	159	89	75	58
3	45	42	36	30	27	26	29	60	164	85	69	58
4	44	42	36	30	27	26	28	54	168	82	66	58
5	43	41	36	30	27	26	28	67	186	81	68	57
6	44	41	35	30	27	26	28	65	178	81	68	60
7	44	39	35	30	27	26	28	64	166	81	68	60
8	44	39	35	30	27	26	28	60	162	81	68	60
9	46	39	35	29	27	26	28	56	157	82	71	60
10	45	39	34	29	28	26	28	54	142	82	71	57
11	44	38	34	29	28	26	27	59	135	82	71	57
12	43	38	34	29	28	26	27	75	155	81	68	57
13	45	38	34	28	28	26	27	100	148	81	66	58
14	43	38	34	28	28	26	27	142	166	81	64	58
15	43	38	34	28	28	26	32	127	168	75	67	58
16	42	38	33	28	28	26	34	120	160	75	66	58
17	42	36	33	28	28	26	34	124	153	74	66	58
18	41	38	32	28	28	26	33	148	160	74	66	60
19	41	38	32	28	28	26	32	135	135	78	66	60
20	41	38	32	27	28	26	32	127	126	74	64	58
21	41	38	32	27	28	26	33	133	122	71	64	57
22	41	38	32	27	28	26	33	148	118	68	62	56
23	41	38	31	28	28	26	34	175	115	67	64	56
24	41	38	31	28	28	26	35	196	109	67	64	55
25	41	38	30	28	28	27	37	208	102	68	64	54
26	41	38	30	28	28	27	38	210	99	68	54	52
27	41	38	30	28	28	27	41	221	95	68	63	51
28	42	38	30	27	27	27	42	210	95	67	62	50
29	41	38	30	27	-	28	44	192	96	67	62	50
30	41	38	30	27	-	29	47	173	93	67	61	50
31	41	-	30	27	-	29	-	161	-	66	60	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				1,321	46	41	42.6	2,620				
November.....				1,164	42	38	38.8	2,310				
December.....				1,024	37	30	33.0	2,030				
Calendar year 1940.....				19,824	165	29	54.2	39,320				
January.....				881	30	27	28.4	1,750				
February.....				774	28	27	27.6	1,540				
March.....				815	29	26	28.4	1,620				
April.....				973	47	27	32.4	1,930				
May.....				3,779	221	50	122	7,500				
June.....				4,157	186	93	139	8,250				
July.....				2,355	90	66	76.0	4,870				
August.....				2,055	78	60	66.3	4,020				
September.....				1,703	60	50	56.8	3,390				
Water year 1940-41.....				21,004	221	26	57.5	41,680				

Note.- No gage-height record Jan. 4 to Feb. 13; discharge computed on basis of one discharge measurement, weather records, and records for nearby stations.

## HENRYS FORK BASIN

Henry's Fork near Lake, Idaho

Location.— Water-stage recorder, lat. 44°36', long. 111°21', in SW¼ sec. 26, T. 15 N., R. 43 E., a quarter of a mile downstream from Henry's Lake Dam and 4 miles south of Lake post office.

Drainage area.— 104 square miles, including that of Dry Creek Basin.

Records available.— September 1922 to September 1941. May 1920 to September 1922 at site 3 miles downstream and below mouth of Dry Creek, floodwaters of which have been diverted into Henry's Lake since 1923.

Extremes.— Maximum discharge during year, 225 second-feet July 8-14 (gage height, 2.32 feet); minimum, 2 second-feet Oct. 1-15 (leakage through reservoir gates).  
1920-41: Maximum discharge, 507 second-feet June 13, 1926 (gage height, 5.40 feet); minimum, 0.1 second-foot Oct. 3-31, 1937.

Remarks.— Records good except those for periods of no gage-height record, which are fair. Flow regulated by gates at Henry's Lake (see p. 49), which remained closed Oct. 1 to June 19 and Sept. 27-30; flow during these periods was leakage through gates.

Cooperation.— Gage-height record furnished by North Fork Reservoir Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										a19	209	26
2										19	209	26
3										a19	209	26
4										a19	209	26
5										a19	209	26
6										a19	211	26
7										19	211	27
8		a2								96	211	27
9										225	211	27
10								a6	a8	225	209	27
11										225	211	27
12										225	211	27
13										225	211	27
14										225	142	28
15										224	27	27
16			a4	a4	a4	a5	a5	a5		224	27	28
17										224	26	28
18										224	26	28
19										222	26	28
20										222	25	28
21										222	24	17
22										220	24	6
23		a3								217	23	5
24										216	24	4
25								a7	a18	216	24	4
26										214	24	a4
27										212	24	a4
28										211	24	a4
29									a19	211	25	a4
30										209	25	a4
31										209	26	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						78	-	-	2.5	155		
November.....						120	-	-	4.0	238		
December.....						124	-	-	4.0	246		
Calendar year 1940.....						17,195	371	2	47.0	34,100		
January.....						124	-	-	4.0	246		
February.....						140	-	-	5.0	278		
March.....						155	-	-	5.0	307		
April.....						150	-	-	5.0	298		
May.....						197	-	-	6.4	391		
June.....						353	-	-	11.8	700		
July.....						5,276	225	19	170	10,469		
August.....						3,296	211	23	106	6,540		
September.....						596	28	4	19.9	1,180		
Water year 1940-41.....						10,609	225	-	29.1	21,040		

a No gage-height record; discharge computed on basis of discharge measurements and field estimates of flow made on Nov. 14, May 8, June 3, 21, July 2, 7, Oct. 9, records of gate operation, and interpolation.

## Island Park Reservoir near Island Park, Idaho

Location.— Electric tape gage, lat. 44°25', long. 111°24', in gate house shaft at dam on Henrys Fork, a quarter of a mile south of quarter corner between secs. 28 and 29, T. 13 N., R. 43 E., a quarter of a mile upstream from Buffalo River, and 2 miles west of Island Park. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1940, staff and mercury pressure gages at same site and datum.

Drainage area.— 478 square miles.

Records available.— November 1938 to September 1941.

Extremes.— Maximum contents observed during year, 133,830 acre-feet May 15, 16, 28 (elevation, 6,302.83 feet); minimum observed, 17,040 acre-feet Oct. 2, 3 (elevation, 6,274.36 feet).

1938-40: Maximum contents observed, 136,905 acre-feet May 5, 6, 1939 (elevation, 6,303.21 feet); minimum observed after first filling of reservoir, 16,855 acre-feet Sept. 27, 1940 (elevation, 6,274.22 feet).

Remarks.— Reservoir is formed by earth fill rock-faced dam. Storage began Nov. 15, 1938. Capacity, 127,265 acre-feet between elevations 6,239 feet (normal low-water level with outlet gates open) and 6,302 feet (crest of spillway) above mean sea level. Natural flow passing through reservoir when outlet gates are open prevents withdrawal of storage to elevation 6,230 feet (sill of lower outlet). Dead storage negligible. Gage read once daily at 8 a.m. Contents given herein are computed from elevations at that time; all available for release.

Cooperation.— Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,050	17,415	29,590	50,420	70,640	88,530	106,895	132,510	133,190	122,110	87,720	57,860
2	17,040	17,415	30,285	51,035	71,275	89,215	107,525	132,630	132,870	121,730	85,990	57,075
3	17,040	17,440	30,975	51,660	71,910	89,845	108,235	132,630	132,470	120,970	84,295	56,225
4	17,245	17,480	31,750	52,325	72,555	90,475	108,945	132,960	132,550	120,615	82,495	55,425
5	17,300	17,530	32,470	52,965	73,180	91,060	109,655	133,030	133,110	119,460	80,955	54,635
6	17,310	17,625	33,155	53,690	73,780	91,620	110,365	133,030	132,870	118,190	78,975	53,870
7	17,300	17,675	33,765	54,425	74,355	92,195	111,180	132,710	132,650	117,595	76,920	52,765
8	17,285	17,755	34,480	55,090	75,020	92,770	111,810	132,790	132,950	115,990	74,965	51,815
9	17,270	17,835	35,130	55,720	75,630	93,355	112,530	133,030	132,870	114,790	72,990	50,730
10	17,245	17,860	35,795	56,350	76,245	93,870	113,255	133,030	132,630	113,695	71,010	49,775
11	17,220	17,860	36,480	56,990	77,030	94,325	113,965	133,030	132,470	112,385	69,230	48,730
12	17,180	17,855	37,065	57,595	77,770	94,910	114,715	133,030	132,150	111,735	68,410	47,635
13	17,205	17,780	37,645	58,210	78,515	95,565	115,375	133,360	132,230	110,440	66,310	46,705
14	17,205	17,765	38,270	58,830	79,095	96,025	116,040	133,110	132,070	109,155	67,745	46,765
15	17,220	17,740	38,910	59,495	79,730	96,555	116,925	133,630	131,990	108,235	67,090	44,870
16	17,235	18,375	39,535	60,170	80,370	97,145	117,890	133,830	131,910	106,825	65,345	44,095
17	17,260	19,125	40,190	60,810	80,955	97,740	118,935	133,670	131,830	105,220	65,945	43,370
18	17,280	19,900	40,830	61,455	81,545	98,340	119,610	133,510	131,515	103,765	65,550	42,685
19	17,245	20,680	41,515	62,105	82,140	98,875	120,290	133,350	131,435	102,120	65,505	42,075
20	17,235	21,435	42,110	62,760	82,735	99,410	120,895	133,030	131,355	100,490	65,995	41,605
21	17,235	22,185	42,780	63,425	83,330	100,285	121,425	133,030	131,435	98,810	66,045	41,205
22	17,235	22,950	43,435	64,095	84,050	100,825	122,030	132,790	131,195	97,345	65,995	40,435
23	17,235	23,685	44,130	64,770	84,720	101,505	122,790	132,960	131,035	95,895	65,995	40,435
24	17,235	24,415	44,905	65,455	85,325	102,120	123,705	133,110	130,720	94,975	65,355	40,160
25	17,220	25,140	45,690	66,145	85,990	102,595	124,860	133,030	130,170	94,130	64,430	39,615
26	17,220	25,840	46,320	66,990	86,605	103,145	126,095	133,030	128,595	93,415	63,900	39,705
27	17,220	26,580	47,025	67,595	87,225	103,695	127,875	133,760	127,110	92,330	62,960	39,685
28	17,310	27,340	47,745	68,255	87,845	104,250	129,065	133,830	126,710	91,940	62,105	39,580
29	17,350	28,150	48,435	68,970	-	104,735	130,405	133,590	124,395	91,050	60,565	39,280
30	17,390	28,990	49,065	69,440	-	105,360	131,515	133,510	123,475	90,225	59,405	39,230
31	17,415	-	49,810	69,960	-	106,265	-	133,190	-	88,905	58,740	-

Elevation and contents, water year October 1940 to September 1941

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	6,274.37	17,050	=
Oct. 31.....	6,274.65	17,415	+365
Nov. 30.....	6,281.80	28,990	+11,475
Dec. 31.....	6,286.74	49,510	+20,520
Calendar year 1940.....	-	-	-34,305
Jan. 31.....	6,293.25	69,960	+20,150
Feb. 28.....	6,296.37	87,845	+17,885
Mar. 31.....	6,299.16	106,285	+18,420
Apr. 30.....	6,302.64	131,515	+25,230
May 31.....	6,302.75	133,190	+1,675
June 30.....	6,301.51	123,475	-9,715
July 31.....	6,296.54	88,905	-34,570
Aug. 31.....	6,290.92	59,240	-30,165
Sept. 30.....	6,285.58	39,730	-19,510
Water year 1940-41	-	-	+22,180

## Henrys Fork near Island Park, Idaho

Location.- Water-stage recorder, lat. 44°25', long. 111°24', in SW¼ sec. 28, T. 13 N., R. 43 E., an eighth of a mile upstream from Buffalo River, an eighth of a mile downstream from Island Park Dam, and 2 miles west of Island Park. Altitude of gage, 6,225 feet (from river profile map).

Drainage area.- 478 square miles.

Records available.- January 1933 to September 1941.

Extremes.- Maximum discharge during year, 1,550 second-feet Aug. 6 (gage height, 5.00 feet); minimum, 3 second-feet Nov. 16 to Dec. 6 (gage height, 0.92 foot).  
1933-41: Maximum discharge, 1,940 second-feet July 17, 1940 (gage height, 5.22 feet); minimum, 1 second-foot Nov. 16 to Dec. 7, 1938.

Remarks.- Records good. Flow regulated by Island Park Reservoir (see p. 41), and Henrys Lake (see p. 49).

Cooperation.- Gage-height record and results of five discharge measurements furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	452	416	3	6	7	9	10	434	639	770	1,310	872
2	452	416	3	6	8	9	10	480	564	635	1,410	861
3	452	416	3	6	8	9	10	503	536	671	1,400	856
4	452	416	3	6	8	9	11	508	531	612	1,390	905
5	452	416	3	6	8	9	11	526	574	960	1,500	938
6	452	416	3	6	8	9	11	503	574	960	1,560	972
7	452	416	3	6	8	9	11	475	498	960	1,540	956
8	447	420	3	6	8	9	11	498	503	960	1,540	966
9	447	420	3	6	8	9	11	526	508	996	1,540	960
10	447	420	4	6	8	9	11	526	508	1,120	1,530	960
11	447	420	4	6	8	9	11	526	545	1,120	1,310	960
12	434	420	5	6	8	9	11	531	574	1,130	873	938
13	424	420	5	6	8	9	11	559	526	1,130	883	894
14	424	416	5	6	8	9	11	563	508	1,120	883	894
15	424	218	5	7	8	9	11	630	503	1,190	644	866
16	424	3	5	7	8	10	11	620	494	1,400	668	822
17	424	3	5	7	8	10	11	611	484	1,400	592	800
18	424	3	5	7	8	10	11	564	465	1,400	536	722
19	424	3	5	7	8	10	11	541	480	1,460	407	703
20	424	3	5	7	8	10	11	526	482	1,480	420	659
21	424	3	5	7	8	10	12	522	447	1,390	461	654
22	424	3	5	7	8	10	12	489	465	1,320	465	644
23	424	3	5	7	8	10	12	498	476	1,130	656	635
24	424	3	5	7	8	10	12	508	630	954	556	602
25	424	3	5	7	9	10	12	498	940	978	844	550
26	416	3	6	7	9	10	14	541	1,060	984	888	506
27	416	3	6	7	9	10	50	597	1,120	984	954	480
28	416	3	6	7	9	10	150	611	1,090	984	1,010	465
29	416	3	6	7	-	10	263	597	1,080	990	1,010	438
30	416	3	6	7	-	10	363	673	1,090	1,170	949	424
31	416	-	6	7	-	10	-	693	-	1,270	872	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							13,394	452	416	432	26,570	
November.....							6,111	420	3	204	12,120	
December.....							141	6	3	4.6	280	
Calendar year 1940.....							196,059	1,900	3	536	388,900	
January.....							203	7	6	6.6	403	
February.....							227	9	7	8.1	450	
March.....							295	10	9	9.5	585	
April.....							1,117	363	10	37.2	2,220	
May.....							16,097	693	434	545	33,510	
June.....							18,863	1,120	447	629	37,410	
July.....							33,648	1,460	635	1,092	67,140	
August.....							31,126	1,550	407	1,004	61,740	
September.....							22,914	972	424	764	45,450	
Water year 1940-41.....							145,136	1,550	3	398	287,900	

Note.- Discharge computed from staff gage readings Nov. 16 to Apr. 25.



## Henrys Fork at Warm River, Idaho

Location.- Water-stage recorder, lat. 44°07', long. 111°20', in sec. 12, T. 9 N., R. 43 E., 1,000 feet upstream from Warm River and half a mile northwest of Warm River railroad station. Altitude of gage, 5,255 feet (from river-profile map).

Drainage area.- 660 square miles.

Records available.- September 1910 to March 1915, April 1918 to September 1941.

Extremes.- Maximum discharge during year, 1,880 second-feet Aug. 6-8 (gage height, 5.77 feet); minimum, 228 second-feet Dec. 11 (gage height, 3.19 feet).  
1910-15, 1918-41: Maximum discharge, 3,540 second-feet May 18, 1927 (gage height, 7.55 feet); minimum, 218 second-feet Jan. 19, 1940 (gage height, 3.17 feet).

Remarks.- Records good except those for periods of doubtful or no gage-height record, which are fair. Flow regulated by Henrys Lake (see p. 49) and Island Park Reservoir (see p. 41). Some water diverted above station for irrigation of meadows on headwaters.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	876	817	399	a350	341	373	390	944	1,050	1,320	1,610	1,280
2	883	824	407	a360	d341	382	407	1,010	986	993	1,700	1,210
3	883	824	412	345	d345	a378	430	1,040	917	979	1,730	1,200
4	883	817	403	349	d350	a374	439	1,060	924	1,060	1,730	1,220
5	870	811	378	407	d360	a370	467	1,040	986	1,190	1,760	1,240
6	850	824	382	403	d365	a366	453	1,030	979	1,250	1,860	1,280
7	850	830	412	373	d370	a362	425	965	958	1,250	1,860	1,290
8	843	830	375	365	d375	357	421	1,010	890	1,270	1,860	1,290
9	843	830	353	369	d380	353	430	1,080	890	1,270	1,830	1,290
10	843	817	317	361	d385	329	444	1,060	863	1,360	1,830	1,270
11	843	817	302	353	a390	317	445	1,020	876	1,420	1,830	1,270
12	843	805	321	345	a370	329	448	1,010	924	1,440	1,580	1,270
13	824	741	302	349	a380	329	481	1,030	931	1,430	1,290	1,220
14	817	843	310	369	a370	341	467	1,080	866	1,440	1,270	1,210
15	817	870	333	382	a380	361	481	1,120	870	1,450	1,250	1,220
16	817	659	341	373	382	365	520	1,080	856	1,640	1,170	1,160
17	817	394	390	365	378	357	462	1,050	837	1,660	1,010	1,160
18	817	435	430	365	361	357	430	1,040	817	1,680	1,010	1,110
19	817	353	444	369	373	361	416	993	850	1,700	903	1,080
20	805	353	a444	373	a375	375	416	961	856	1,760	870	1,030
21	798	439	a444	378	a378	369	416	924	792	1,740	870	1,020
22	805	373	a440	369	a380	365	430	910	779	1,640	876	1,010
23	805	349	a425	369	382	365	472	876	811	1,570	876	1,010
24	798	369	a405	a366	366	349	520	876	817	1,410	1,180	993
25	805	394	390	a364	369	357	596	890	1,070	1,380	1,220	944
26	811	394	386	361	341	367	601	985	1,340	1,370	1,250	897
27	856	366	394	382	341	365	628	1,040	1,350	1,360	1,320	a877
28	843	390	361	345	378	369	656	1,060	1,390	1,370	1,350	a857
29	837	403	333	357	-	373	741	1,030	1,410	1,370	1,580	837
30	824	386	a380	353	-	390	850	1,000	1,400	1,390	1,560	817
31	817	-	a370	341	-	382	-	1,070	-	1,600	1,250	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						25,840	883	798	834		51,250	
November.....						18,257	870	349	609		36,210	
December.....						11,786	444	302	350		23,380	
Calendar year 1940.....						348,431	2,180	302	952		691,100	
January.....						11,300	407	341	365		22,410	
February.....						10,306	390	341	365		20,440	
March.....						11,180	390	317	361		22,180	
April.....						14,765	950	390	493		29,330	
May.....						31,254	1,120	876	1,008		61,990	
June.....						29,255	1,410	779	975		58,030	
July.....						43,762	1,760	979	1,412		86,800	
August.....						42,675	1,860	870	1,377		84,640	
September.....						33,492	1,290	817	1,116		66,430	
Water year 1940-41.....						253,892	1,660	302	778		563,100	

a No gage-height record; discharge computed on basis of records for stations at Island Park and Ashton and weather records.

b Doubtful gage-height record; discharge computed on basis of records for stations at Island Park and Ashton and weather records.

## HENRYS FORK BASIN

Henrys Fork near Ashton, Idaho

Location.- Water-stage recorder, lat. 44°05', long. 111°30', in sec. 28, T. 9 N., R. 42 E., a quarter of a mile downstream from power plant and  $\frac{3}{4}$  miles west of Ashton. Altitude of gage, 5,095 feet (from river profile map).

Drainage area.- 1,030 square miles.

Records available.- August 1902 to June 1909, April 1920 to September 1941.

Extremes (regulated).- Maximum discharge during year, 2,380 second-feet July 20 (gage height, 6.99 feet); maximum gage height, 7.04 feet Aug. 11, 12; minimum discharge, 174 second-feet Dec. 28 (gage height, 5.00 feet); minimum daily discharge, 494 second-feet Dec. 11, 12.

1902-9, 1920-41: Maximum discharge, 6,220 second-feet May 7, 1925; minimum, 65 second-feet Oct. 16, 1935 (gage height, 4.59 feet); minimum daily, 440 second-feet Dec. 5, 1931.

Remarks.- Records excellent. Flow regulated at power plant above station and by Henrys Lake (see p. 49) and Island Park Reservoir (see p. 41). Some water diverted above station for irrigation of meadows on headwaters.

Cooperation.- Gage-height record during nonirrigation season furnished by Utah Power and Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,100	636	544	598	686	878	1,630	1,550	1,980	1,880	1,500
2	1,170	1,110	731	580	598	686	876	1,720	1,470	1,360	2,020	1,530
3	1,250	1,160	632	519	618	676	847	1,730	1,330	1,340	2,060	1,480
4	1,220	1,100	649	644	636	676	916	1,790	1,380	1,420	2,060	1,520
5	854	1,070	656	692	598	676	904	1,700	1,440	1,560	2,020	1,580
6	1,240	1,060	635	718	646	646	858	1,700	1,520	1,720	2,220	1,600
7	1,050	1,060	642	671	656	646	814	1,560	1,450	1,650	2,220	1,700
8	1,100	1,130	659	645	627	646	847	1,650	1,420	1,650	2,200	1,660
9	1,130	1,090	647	664	656	656	858	1,750	1,400	1,660	2,220	1,630
10	1,140	1,170	602	616	676	646	858	1,700	1,320	1,750	2,260	1,610
11	1,100	1,070	494	618	676	627	880	1,660	1,330	1,840	2,280	1,610
12	1,090	914	494	639	696	627	836	1,650	1,340	1,840	1,660	1,550
13	1,100	908	510	551	618	636	904	1,660	1,420	1,830	1,610	1,580
14	1,100	1,160	519	673	618	636	904	1,730	1,280	1,810	1,440	1,520
15	1,070	1,100	536	644	627	656	904	1,810	1,230	1,810	1,450	1,550
16	1,060	863	580	628	636	696	952	1,720	1,300	2,040	1,400	1,520
17	1,100	510	646	640	646	665	952	1,610	1,260	2,040	1,200	1,420
18	1,070	741	752	638	646	665	847	1,600	1,240	2,120	1,200	1,380
19	1,090	580	698	638	646	707	803	1,530	1,230	2,120	1,170	1,360
20	1,070	580	658	673	656	749	792	1,580	1,260	2,260	1,050	1,300
21	1,070	627	666	629	665	738	761	1,170	1,200	2,180	1,080	1,320
22	1,020	616	651	598	656	738	792	1,330	1,330	2,000	1,030	1,250
23	1,060	580	630	656	665	796	636	1,320	1,280	1,940	1,090	1,340
24	966	570	666	656	686	803	952	1,330	1,200	1,750	1,440	1,210
25	976	665	671	646	676	880	1,040	1,330	1,230	1,650	1,440	1,260
26	988	636	649	636	646	853	1,170	1,450	1,750	1,630	1,530	1,120
27	1,160	704	722	665	598	870	1,190	1,680	1,840	1,630	1,580	1,160
28	1,140	598	599	618	686	739	1,190	1,700	1,860	1,580	1,680	1,100
29	1,080	707	627	618	-	952	1,330	1,550	1,880	1,580	1,660	1,100
30	1,270	608	621	618	-	938	1,480	1,500	1,880	1,580	1,720	1,040
31	1,090	-	653	608	-	900	-	1,580	-	1,900	1,580	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						34,074	1,270	884	1,099	67,580		
November.....						25,800	1,170	510	860	51,170		
December.....						19,520	731	494	630	38,720		
Calendar year 1940.....						478,947	2,590	494	1,309	950,000		
January.....						19,533	718	519	630	36,740		
February.....						18,052	696	598	645	35,810		
March.....						22,511	952	627	726	44,650		
April.....						28,191	1,480	781	940	55,920		
May.....						49,420	1,810	1,170	1,594	98,020		
June.....						42,620	1,880	1,200	1,421	84,540		
July.....						55,140	2,280	1,340	1,779	109,400		
August.....						51,500	2,280	1,050	1,661	102,100		
September.....						42,510	1,700	1,040	1,417	84,320		
Water year 1940-41.....						406,871	2,280	494	1,120	811,000		

## Diversions from Henrys Fork between Ashton and St. Anthony gaging station, Idaho

Between Ashton and St. Anthony gaging stations, seven canals divert water from Henrys Fork for irrigation. Records available each irrigation season from 1919 to 1941. Records of discharge of canals are combined to show total diverted flow. During July, August, and September, records computed from daily staff-gage readings and are good. During May and June, records computed or interpolated from daily or biweekly staff-gage readings and are fair.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								850	1,060	882	1,090	604
2								896	1,030	814	1,070	608
3								910	1,090	920	1,090	658
4								918	1,120	923	1,090	647
5								928	1,090	984	1,100	648
6								939	1,080	1,010	1,140	648
7								952	984	1,020	1,140	650
8								995	918	1,010	1,180	555
9								1,060	809	1,020	1,080	535
10								1,060	801	973	1,060	393
11								1,100	760	998	841	373
12								1,180	939	1,010	732	363
13								1,250	998	1,010	786	361
14								1,290	1,010	1,010	800	348
15								1,270	1,020	1,020	787	345
16								1,250	1,030	1,050	786	342
17								1,260	986	1,130	742	340
18								1,280	952	1,130	735	332
19								1,260	772	1,140	735	363
20								1,260	777	1,160	739	344
21								1,220	806	1,030	741	334
22								1,290	816	937	703	328
23								1,310	835	947	695	328
24								1,310	830	949	720	341
25								1,280	879	880	740	338
26								1,210	791	843	729	340
27								1,100	836	845	617	334
28								1,110	953	836	632	331
29								1,090	937	855	622	331
30								1,070	922	897	607	331
31								1,080	-	1,090	607	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....								-	-	-	-	-
February.....								-	-	-	-	-
March.....								-	-	-	-	-
April.....								-	-	-	-	-
May.....								34,978	1,310	850	1,128	69,380
June.....								27,821	1,120	760	927	55,180
July.....								30,323	1,160	814	978	60,140
August.....								26,106	1,180	607	842	51,780
September.....								12,793	658	328	426	25,370
The period.....								-	-	-	-	261,800

## HENRYS FORK BASIN

Henrys Fork at St. Anthony, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 111°41', in sec. 1, T. 7 N., R. 40 E., half a mile upstream from bridge on main street of St. Anthony. Altitude of gage, 4,950 feet (from river-profile map).

Drainage area.- 1,730 square miles.

Records available.- March 1919 to September 1941 (irrigation seasons only).

Extremes.- Maximum discharge recorded during year, 3,490 second-feet May 28 (gage height, 4.77 feet); minimum recorded, 473 second-feet June 24, 25 (gage height, 2.87 feet). 1919-41: Maximum discharge recorded, 9,030 second-feet May 8, 1925 (gage height, 6.70 feet); minimum daily recorded, 413 second-feet July 22, 1931 (gage height, 2.78 feet).

Remarks.- Records excellent. Diversions above station for irrigation. Flow regulated by power plant 17 miles upstream and by storage in Henrys Lake (see p. 49), Island Park Reservoir (see p. 41), and Grassy Lake (see p. 49).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								2,580	1,840	1,110	972	1,150
2								2,650	1,480	730	1,030	1,150
3								2,770	1,190	659	1,130	1,080
4								2,800	1,260	676	1,240	1,110
5								2,470	1,490	702	1,200	1,160
6								2,290	2,000	816	1,220	1,140
7								1,940	1,540	786	1,150	1,220
8								2,000	1,960	730	1,140	1,360
9								2,560	1,820	730	1,190	1,420
10								2,320	1,540	767	1,210	1,490
11								2,170	1,290	836	1,480	1,430
12								2,170	1,160	806	1,330	1,360
13								2,340	1,160	806	1,210	1,400
14								2,650	963	846	1,140	1,310
15								2,570	930	856	1,100	1,310
16								2,170	962	940	1,040	1,440
17								1,750	846	1,020	846	1,360
18								1,620	712	994	776	1,340
19								1,630	634	983	806	1,260
20								1,330	712	1,060	676	1,210
21								1,070	667	1,190	650	1,190
22								1,160	676	1,180	659	1,150
23								1,220	634	1,080	667	1,250
24								1,430	505	972	836	1,200
25								1,520	532	962	951	1,210
26								1,770	1,040	951	1,030	1,150
27								2,520	1,130	951	1,120	1,120
28								3,280	1,120	908	1,260	1,120
29								2,320	1,080	887	1,250	1,110
30								1,940	1,130	856	1,230	1,050
31								1,880	-	962	1,240	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....												
November.....												
December.....												
Calendar year .....												
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							-	-	-	-	-	
May.....							65,690	3,280	1,070	2,119	130,300	
June.....							34,323	2,000	505	1,144	68,080	
July.....							27,752	1,190	659	895	55,060	
August.....							32,849	1,480	860	1,060	65,160	
September.....							37,250	1,490	1,050	1,242	73,880	
The period.....							-	-	-	-	392,500	

## Diversions from Henrys Fork between St. Anthony and Rexburg gaging stations, Idaho

Between St. Anthony and Rexburg gaging stations, four canals divert water from Henrys Fork for irrigation. Records available for part of each irrigation season from 1919 to 1941. Records of discharge of canals are combined to show total diverted flow. During July, August, and September records computed from daily staff-gage readings and are good. During May and June records computed or interpolated from bi-weekly staff-gage readings and are fair.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								713	933	569	753	554
2								719	941	564	759	551
3								724	990	585	736	569
4								770	1,030	809	724	593
5								791	922	694	677	573
6								830	875	665	708	487
7								870	806	678	703	438
8								907	586	662	706	418
9								975	617	653	669	421
10								1,010	700	657	577	418
11								1,010	777	629	574	409
12								1,040	796	700	491	402
13								1,080	884	692	491	426
14								1,110	904	663	488	393
15								1,120	888	661	513	393
16								1,140	826	581	541	349
17								1,120	770	658	539	337
18								1,150	717	694	505	315
19								1,110	566	686	587	307
20								1,100	779	661	532	300
21								1,010	768	626	507	306
22								1,070	747	594	533	300
23								1,140	757	545	576	270
24								1,210	683	544	533	295
25								1,180	503	485	514	266
26								1,070	983	515	518	252
27								990	947	543	525	252
28								955	778	576	525	252
29								925	677	626	539	252
30								942	583	666	512	252
31								954	-	728	516	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						-	-	-	-	-		
May.....						30,735	1,210	713	991	60,960		
June.....						23,733	1,030	503	791	47,070		
July.....						19,549	725	485	631	39,770		
August.....						18,051	759	486	582	35,900		
September.....						11,350	593	262	378	22,510		
The period.....						-	-	-	-	205,100		

## Henrys Fork near Rexburg, Idaho

Location.- Water-stage recorder, lat. 43°50', long. 111°54', in sec. 30, T. 6 N., R. 39 E., just downstream from highway bridge, downstream from all tributaries, and 7 miles west of Rexburg. Altitude of gage, 4,807 feet (from river-profile map).

Drainage area.- 3,010 square miles.

Records available.- April 1909 to September 1941.

Extremes.- Maximum discharge during year, 3,540 second-feet May 29 (gage height, 6.56 feet); minimum, 700 second-feet Aug. 2, 3 (gage height, 2.64 feet).  
1909-41: Maximum discharge, 9,490 second-feet June 29, 1927 (gage height, 9.90 feet); minimum, 183 second-feet March 24-28, 1934 (gage height, 1.45 feet).

Remarks.- Records good except those for periods of ice effect, which are fair. Flow regulated by operation of power plant at Ashton and by Henrys Lake (see p. 49), Island Park Reservoir (see p. 41), and Grassy Lake (see p. 49). Many diversions above station for irrigation. No diversions from Henrys Fork below station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	1,630	1,240	1,350	1,100	1,220	1,950	2,000	2,150	1,350	750	1,250
2	1,740	1,600	1,280	1,190	1,120	1,420	1,790	2,340	1,980	1,260	715	1,160
3	1,680	1,580	1,310	1,090	1,130	1,640	1,750	2,500	1,520	978	780	1,110
4	1,670	1,580	1,260	1,060	1,150	1,520	1,750	2,650	1,190	896	879	1,040
5	1,660	1,560	1,260	1,210	1,160	1,380	1,680	2,730	1,280	923	967	1,100
6	1,580	1,540	1,230	1,310	1,140	1,340	1,660	2,500	1,760	923	940	1,120
7	1,520	1,550	1,200	1,290	1,170	1,290	1,520	2,300	2,180	945	962	1,160
8	1,470	1,560	1,200	1,290	*1,200	1,280	1,370	1,890	2,510	950	906	1,310
9	1,460	1,660	1,200	1,260	1,190	1,260	1,290	2,000	2,700	896	912	1,420
10	1,460	1,670	1,170	1,260	1,240	1,250	1,260	2,260	2,550	846	976	1,490
11	1,440	1,640	1,080	1,250	1,280	1,160	1,230	2,030	2,170	796	1,150	1,520
12	1,420	*1,590	962	1,250	1,290	1,100	1,200	2,010	1,760	791	1,620	1,460
13	1,390	1,400	846	1,220	1,230	1,090	1,200	2,070	1,540	750	1,430	1,430
14	1,380	1,410	967	1,240	1,170	1,100	1,250	2,300	1,300	735	1,550	1,410
15	1,380	1,690	1,080	1,270	1,140	1,090	1,150	2,650	1,200	796	1,430	1,380
16	1,370	1,710	1,170	1,250	1,170	1,130	1,170	2,610	1,320	745	1,350	1,430
17	1,350	1,540	1,220	1,240	1,170	1,180	1,290	1,960	1,390	775	1,220	1,510
18	1,410	1,290	1,320	1,240	1,170	1,320	1,180	1,460	1,550	791	1,080	1,460
19	1,380	1,380	1,360	1,270	1,190	1,610	1,020	1,620	1,330	884	1,040	1,400
20	1,410	1,230	1,370	1,270	1,200	1,910	1,010	1,370	1,510	912	1,020	1,380
21	1,430	1,220	1,370	1,320	1,220	2,000	1,020	1,160	1,280	1,090	940	1,340
22	1,400	1,250	1,370	1,240	*1,200	1,740	989	884	1,180	1,230	906	1,360
23	1,370	1,170	1,340	1,260	1,220	1,790	962	840	1,130	1,180	884	1,390
24	1,330	1,110	1,360	1,260	1,260	1,820	989	901	1,080	1,110	674	1,510
25	1,300	1,190	1,430	1,270	1,310	1,760	1,030	1,050	1,020	1,100	1,020	1,500
26	1,270	1,280	*1,450	1,270	1,280	1,820	1,160	1,240	967	1,090	1,090	1,520
27	1,320	1,240	1,420	1,220	1,220	1,860	1,270	1,790	1,090	1,040	1,160	1,430
28	1,560	1,280	1,440	1,120	1,160	2,040	1,410	2,900	1,090	967	1,260	1,460
29	1,580	1,240	1,370	1,120	-	1,950	1,490	3,300	1,170	874	1,320	1,440
30	1,670	1,290	1,340	1,130	-	2,170	1,740	2,690	1,320	791	1,320	1,400
31	1,730	-	1,350	1,110	-	2,120	-	2,280	-	740	1,320	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						45,920	1,760	1,270	1,481	91,080		
November.....						43,070	1,710	1,110	1,436	85,430		
December.....						38,965	1,450	846	1,257	77,290		
Calendar year 1940.....						577,664	4,260	650	1,678	1,146,000		
January.....						38,170	1,350	1,060	1,231	75,710		
February.....						33,500	1,310	1,100	1,196	69,450		
March.....						47,400	2,170	1,090	1,529	94,020		
April.....						39,780	1,950	962	1,326	79,900		
May.....						62,285	3,300	840	2,009	123,500		
June.....						45,837	2,700	967	1,528	90,920		
July.....						29,094	1,350	735	939	57,710		
August.....						35,773	1,620	715	1,089	66,990		
September.....						40,890	1,520	1,040	1,363	81,100		
Water year 1940-41.....						498,684	3,300	715	1,366	989,100		

\* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 18-28, Jan. 3-25, Feb. 2-12.

## Smaller reservoirs in Henrys Fork Basin

Henrys Lake.— Staff gage, lat. 44°36', long. 110°21', at dam on Henrys Fork in SW $\frac{1}{4}$  sec. 26, T. 15 N., R. 43 E., 4 miles south of Lake Idaho post office. Datum of gage is 6,457.16 feet above mean sea level (levels by Bureau of Reclamation). Drainage area, 104 square miles, including that of Dry Creek. Records available, June 1923 to September 1941 (fragmentary). Maximum contents observed during year, 53,886 acre-feet June 20, 21, 30 (gage height, 10.84 feet); minimum, 36,800 acre-feet Oct. 1 (interpolated). Maximum contents observed during period 1923-41, 75,192 acre-feet July 8-10, 1928 (gage height, 14.34 feet); minimum observed, 140 acre-feet Nov. 8, 1934 (gage height, 0.03 foot).

Reservoir is formed on natural lake by concrete dam; storage began Sept. 21, 1922; dam completed July 1923. Capacity, 79,351 acre-feet between gage heights 0.0 foot (normal low-water level of Henrys Lake prior to construction of dam) and 15.0 feet (top of 5-foot flashboards in spillway). Flood waters of Dry Creek are diverted into Henrys Lake. Water used for irrigation near St. Anthony. Gage read once daily usually about 9 a.m. during period of storage withdrawal and only occasionally during remainder of year. Records given herein represent usable contents. Gage-height record and capacity table furnished by North Fork Reservoir Co.

Grassy Lake.— Mercury pressure gage, lat. 44°08', long. 110°49', in gate house at dam on Grassy Creek, approximately in sec. 7, T. 48 N., R. 118 W. (unsurveyed), half a mile upstream from mouth and 24 miles northwest of Moran, Wyo. Datum of gage is mean sea level (levels by Bureau of Reclamation). Drainage area, 12 square miles, including basin of Cascade Creek, waters from which are diverted into Grassy Lake. Records available, October 1939 to September 1941 (fragmentary). Maximum contents observed during year, 13,145 acre-feet June 20 (elevation 7,203.30 feet); no contents Oct. 2-5. Maximum contents observed during period 1939-41, that of June 20, 1941; no contents Oct. 2-5, 1940.

Reservoir is formed by earth-fill, rock faced dam; storage began Oct. 18, 1939. Capacity, 15,182 acre-feet between elevations 7,135.0 feet (sill of trash rack) and 7,210.0 feet (crest of spillway) above mean sea level. Water is used for irrigation of lands in Fremont-Madison Irrigation district, Idaho. Gage read once daily about 7 a.m. during irrigation season and occasionally during remainder of year. Records given herein represent usable contents. Gage-height record and capacity table furnished by Bureau of Reclamation.

Monthly elevations or gage heights and contents, water year October 1940 to September 1941

Date	Henrys Lake			Grassy Lake		
	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	-	56,800	-	7,141.50	519	-
Oct. 31.....	-	-	-	7,140.80	456	-63
Nov. 30.....	-	-	-	-	5979	+523
Dec. 31.....	-	41,500	-	7,149.90	1,445	+466
Calendar year 1940	-	-	-	-	-	+620
Jan. 31.....	-	-	-	7,153.15	1,895	+438
Feb. 28.....	-	-	-	7,155.60	2,241	+356
Mar. 31.....	-	-	-	7,157.95	2,607	+366
Apr. 30.....	10.02	49,087	-	7,160.50	3,029	+422
May 31.....	-	51,100	+2,013	7,155.65	3,567	+538
June 30.....	10.84	55,886	+2,786	7,196.15	11,104	+2,737
July 31.....	9.02	45,353	-10,533	7,185.50	8,329	-2,775
Aug. 31.....	-	58,400	-4,953	7,182.15	7,519	-810
Sept. 30.....	-	58,900	+500	7,184.65	8,167	+648
Water year 1940-41	-	-	+2,100	-	-	+7,648

a Interpolated.

## HENRYS FORK BASIN

Diversions from Fall River above gaging station near Squirrel, Idaho

Above Squirrel gaging station three canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1941. Records of discharge of canals computed from daily readings of staff gages and combined to show total diverted flow. Records good except those during period May 1 to June 17, which are fair.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	62	178	118	47
2								0	62	177	117	40
3								0	66	177	110	40
4								0	79	177	108	40
5								0	80	177	107	41
6								0	87	182	110	40
7								0	87	184	105	44
8								0	87	183	103	43
9								0	87	181	106	41
10								0	84	185	108	44
11								0	90	183	90	35
12								0	98	179	82	34
13								0	108	185	73	34
14								0	117	180	62	35
15								0	122	179	51	40
16								0	129	174	44	34
17								0	134	172	44	26
18								0	147	172	45	25
19								0	149	169	48	25
20								0	154	166	46	26
21								10	159	150	44	30
22								11	156	158	44	29
23								12	154	151	47	29
24								28	154	125	51	30
25								32	154	129	49	31
26								36	174	124	52	30
27								41	174	124	51	30
28								55	181	124	51	30
29								47	183	127	52	30
30								58	174	127	52	30
31								58	-	126	48	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						-	-	-	-	-		
May.....						390	58	0	12.5	774		
June.....						3,692	183	62	123	7,320		
July.....						5,005	185	124	161	9,930		
August.....						2,214	118	44	71.4	4,590		
September.....						1,031	47	25	34.4	2,040		
The period.....						-	-	-	-	24,450		



## Fall River near Squirrel, Idaho

Location.- Staff gage, lat. 44°04', long. 111°15', in sec. 34, T. 9 N., R. 44 E., 4 miles northeast of Squirrel and 10 miles upstream from Conant Creek.

Drainage area.- 380 square miles.

Records available.- January 1904 to June 1909, May 1918 to September 1941. August 1902 to December 1903, at Wilson's sawmill, 3 miles upstream.

Average discharge.- 28 years (1904-8, 1917-41), 738 second-feet (unadjusted).

Extremes.- Maximum discharge observed during year, 2,490 second-feet May 28 (gage height, 2.94 feet); minimum observed, 266 second-feet Mar. 14 (gage height, 1.00 foot).  
1904-9, 1918-41: Maximum discharge observed, 6,440 second-feet June 27, 1927; minimum observed, 72 second-feet Feb. 9, 1930.

Remarks.- Records good except those for periods of ice effect, which are fair. Flow since October 1939 regulated by Grassy Lake (see p. 49).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	475	354	359	341	341	323	452	1,570	1,440	653	353	384
2	430	384	365	305	335	341	468	1,540	1,420	585	347	384
3	445	391	365	300	335	347	452	1,570	1,390	513	365	384
4	417	391	372	300	335	335	498	1,600	1,500	498	359	384
5	404	384	372	305	329	335	513	1,570	1,720	475	347	384
6	391	354	372	347	329	335	452	1,430	1,870	460	347	391
7	384	384	372	347	329	323	424	1,220	1,610	445	353	445
8	375	398	359	353	329	323	410	1,400	1,640	438	417	430
9	372	398	359	*358	341	323	438	1,510	1,370	391	404	404
10	365	378	*347	353	347	317	452	1,620	1,140	384	430	445
11	359	365	329	347	353	311	482	1,680	1,140	359	482	424
12	369	341	305	347	353	323	513	1,820	1,160	424	430	391
13	369	317	305	355	335	323	581	1,880	1,110	430	480	354
14	353	329	311	347	335	266	561	2,430	1,080	424	398	375
15	353	341	311	347	323	300	561	2,100	1,130	417	384	378
16	347	347	317	341	*329	323	577	1,750	948	410	384	468
17	347	384	323	341	323	323	545	1,610	904	404	384	452
18	347	378	329	353	323	347	513	1,840	926	398	384	430
19	347	372	335	353	323	347	498	1,550	820	384	468	424
20	347	372	359	353	323	347	498	1,310	715	430	424	410
21	347	372	359	353	335	347	498	1,470	830	398	398	404
22	347	372	353	353	335	347	513	1,610	770	391	391	398
23	347	353	353	353	359	359	529	1,750	733	404	375	417
24	347	353	391	353	335	359	528	1,980	715	417	372	417
25	341	353	353	353	335	359	662	2,020	742	424	365	430
26	341	353	378	359	323	359	751	2,050	706	391	391	417
27	341	341	365	359	323	384	871	2,400	697	372	384	404
28	347	365	391	359	323	354	1,100	2,490	577	353	384	398
29	391	353	353	*359	-	398	1,150	1,900	679	347	391	391
30	398	353	365	359	-	438	1,250	1,670	679	341	391	391
31	410	-	365	347	-	410	-	1,530	-	341	391	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						11,536	475	341	372	22,880		
November.....						10,990	398	317	366	21,900		
December.....						10,892	391	305	351	21,600		
Calendar year 1940.....						264,523	3,950	300	723	524,700		
January.....						10,680	359	300	345	21,180		
February.....						9,338	359	323	334	18,520		
March.....						10,656	438	266	344	21,140		
April.....						17,550	1,250	410	595	36,400		
May.....						53,850	2,490	1,220	1,737	106,800		
June.....						32,151	1,870	577	1,072	63,790		
July.....						13,101	653	341	423	25,990		
August.....						12,186	490	347	393	24,170		
September.....						12,241	468	375	408	24,280		
Water year 1940-41.....						205,487	2,490	266	563	407,600		

\* Winter discharge measurement made on this day.

Note.- Stage discharge relation affected by ice Nov. 11-15, 18, 21-30, Dec. 1-3, 11, 13-31, Jan. 1-28, 31, Feb. 1-12.

## Diversions from Fall River between Squirrel and Chester gaging stations, Idaho

Between Squirrel and Chester gaging stations, nine canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1941. Records of discharge of canals combined to show total diverted flow. During July, August, and September, recorder computed from daily staff-gage readings and are good. During May and June, records computed or interpolated from bi-weekly staff-gage readings and are fair.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								20	536	625	377	267
2								60	572	558	376	281
3								98	703	547	371	286
4								20	727	541	242	286
5								140	764	498	221	281
6								167	730	430	363	281
7								169	662	426	365	276
8								191	549	431	374	224
9								201	485	412	447	225
10								280	492	396	460	347
11								297	580	399	377	334
12								437	617	477	372	335
13								453	665	455	108	322
14								476	682	434	108	317
15								511	694	445	220	243
16								566	712	445	261	255
17								561	734	431	327	253
18								589	713	416	327	242
19								596	562	417	324	241
20								668	568	416	317	241
21								708	694	402	316	239
22								730	695	382	313	238
23								788	686	361	307	226
24								784	732	378	314	219
25								783	719	365	304	219
26								786	656	361	321	219
27								780	654	364	332	219
28								502	635	363	339	219
29								536	636	363	298	219
30								505	629	364	295	159
31								522	-	365	260	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						-	-	-	-	-		
May.....						13,906	788	20	449	27,580		
June.....						19,493	764	485	650	39,660		
July.....						13,257	625	361	428	26,290		
August.....						9,726	450	108	314	19,290		
September.....						7,712	347	159	257	16,300		
The period.....						-	-	-	-	127,100		

## Fall River near Chester, Idaho

Location.- Water-stage recorder, lat. 44°01', long. 111°34', in sec. 13, T. 8 N., R. 41 E., half a mile upstream from mouth and 2 miles north of Chester. Altitude of gage, 5,060 feet (from river profile map).

Drainage area.- 560 square miles.

Records available.- April 1920 to September 1941 (irrigation seasons only).

Extremes.- Maximum discharge during period May to September, 2,550 second-feet May 28 (gage height, 4.28 feet); minimum, 21 second-feet July 12 (gage height, 0.99 foot).  
1920-41: Maximum discharge, 6,380 second-feet June 27, 1927 (gage height, 6.60 feet); minimum, 9 second-feet Aug. 7, 1923; minimum gage height, that of July 12, 1941.

Remarks.- Records excellent. Flow since October 1939 regulated by Grassy Lake (see p.49). Station is below all diversions for irrigation from Fall River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,760	1,240	100	55	192
2								1,800	960	91	47	186
3								1,900	852	81	73	186
4								1,870	951	52	173	192
5								1,700	1,190	40	170	195
6								1,560	1,420	a48	102	173
7								1,260	1,240	a56	43	202
8								1,390	1,270	55	42	271
9								1,710	1,140	48	29	255
10								1,540	990	37	37	212
11								1,510	764	27	131	150
12								1,620	670	22	199	134
13								1,790	708	32	366	128
14								2,120	655	14	335	126
15								2,100	670	48	243	139
16								1,540	640	48	212	225
17								1,310	503	50	179	232
18								1,540	382	45	167	212
19								1,340	302	57	212	215
20								1,060	259	89	212	205
21								990	271	139	186	199
22								1,070	199	89	179	189
23								1,240	157	89	164	212
24								1,390	121	106	158	232
25								1,460	189	128	158	243
26								1,490	164	113	161	236
27								2,060	100	95	153	229
28								2,340	167	87	173	225
29								1,710	131	68	192	229
30								1,440	141	60	192	232
31								1,300	-	55	199	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....												
November.....												
December.....												
Calendar year .....												
January.....				-	-	-	-					
February.....				-	-	-	-					
March.....				-	-	-	-					
April.....				-	-	-	-					
May.....				49,510	2,540	990	1,575	97,010				
June.....				18,456	1,420	100	615	36,610				
July.....				2,109	139	22	68.0	4,180				
August.....				4,942	366	29	159	9,800				
September.....				6,056	271	126	202	12,010				
The period.....				-	-	-	-	159,600				

a No gage-height record; discharge interpolated.

## Teton River near Tetonía, Idaho

Location.- Water-stage recorder, lat. 43°51', long. 111°15', in sec. 15, T. 6 N., R. 44 E., 1½ miles downstream from highway bridge and 6 miles northwest of Tetonía.

Drainage area.- 460 square miles.

Records available.- October 1929, March 1930 to September 1932, May to September 1934, July to September 1935, May to September 1940, July to September 1941. Additional records collected by water district 36, State of Idaho: October and November 1932, July to September 1936, July to September 1937.

Extremes.- Maximum discharge observed during period June to September, 1,020 second-feet June 25 (gage height, 1.96 feet); minimum, 314 second-feet Sept. 30 (gage height, 0.94 foot).  
1929-41: Maximum discharge observed, 1,500 second-feet June 27, 1932 (gage height, 2.48 feet); minimum observed, 100 second-feet Sept. 21, 1934 (gage height, 0.47 foot).

Remarks.- Records excellent. Flow reduced by diversions from tributaries above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	657	380	397
2									-	629	392	386
3									-	629	375	386
4									-	626	359	398
5									-	650	354	375
6									-	615	349	370
7									-	599	344	380
8									-	636	344	402
9									-	596	354	397
10									-	528	402	392
11									-	510	402	370
12									-	503	478	354
13									-	472	629	344
14									-	443	535	334
15									-	437	443	344
16									-	431	414	354
17									-	425	431	349
18									-	402	484	354
19									-	392	491	402
20									-	437	503	359
21									-	431	497	359
22									-	397	460	349
23									-	356	446	370
24									-	392	431	397
25									†1,020	414	425	370
26									-	425	414	349
27									-	437	419	339
28									769	419	419	324
29									761	392	414	319
30									708	350	402	314
31									-	380	397	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April.....						-	-	-	-	-		
May.....						-	-	-	-	-		
June.....						-	-	-	-	-		
July.....						15,116	686	350	498	29,990		
August.....						13,169	629	344	425	26,150		
September.....						10,935	402	314	354	21,690		
The period.....						-	-	-	-	77,840		

† Result of discharge measurement.

## Teton River near St. Anthony, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 111°37', in sec. 15, T. 7 N., R. 41 E., half a mile upstream from railroad bridge and 4 miles southeast of St. Anthony.

Drainage area.- 920 square miles.

Records available.- April 1903 to June 1909, April 1920 to September 1941.

Average discharge.- 10 years (1907-8, 1921-22, 1933-41), 698 second-feet.

Extremes.- Maximum discharge during year, 2,390 second-feet May 28 (gage height, 4.94 feet); minimum, 262 second-feet Jan. 28 (gage height, 1.77 feet).  
1903-9, 1930-41: Maximum discharge, 7,820 second-feet June 5, 1909 (gage height, 6.90 feet, site and datum then in use); minimum, 88 second-feet Mar. 12, 1906 (gage height, 1.00 foot, site and datum then in use).

Remarks.- Records excellent except those for periods of ice effect, which are fair.  
Flow affected by diversions from streams in Teton Basin, 20 miles upstream, and by flow diverted from Henrys Fork through Cross Cut canal into Teton River (3,710 acre-feet diverted into river during 1941).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	640	514	471	341	330	399	744	694	1,430	1,130	716	614
2	583	489	412	349	350	*533	678	780	1,270	1,070	711	598
3	548	480	391	316	330	494	689	877	1,200	1,070	705	598
4	555	475	391	316	230	459	650	943	1,270	1,130	683	598
5	538	461	391	340	330	421	588	949	1,460	1,100	694	593
6	504	448	391	*395	330	412	645	923	1,560	1,060	739	589
7	489	461	382	350	330	399	588	970	1,440	1,020	768	598
8	475	489	378	350	335	395	514	852	1,470	1,050	792	635
9	471	504	*378	350	332	395	475	1,150	1,410	1,030	798	624
10	457	480	357	348	345	382	461	1,200	1,360	943	883	614
11	452	443	345	335	349	353	443	1,310	1,270	970	822	604
12	448	399	330	325	357	332	439	1,640	1,270	858	733	588
13	443	421	325	315	356	324	439	2,000	1,320	834	683	578
14	443	421	320	340	328	324	471	2,120	1,540	798	822	573
15	443	457	320	340	324	356	466	1,960	1,750	774	716	563
16	439	439	325	330	332	361	457	1,560	1,840	756	662	583
17	443	421	330	340	332	466	471	1,330	1,990	782	679	578
18	445	434	330	349	328	903	457	1,710	2,050	762	694	578
19	439	403	350	336	328	1,030	457	1,520	2,010	768	705	640
20	434	391	400	341	332	1,020	475	1,210	1,840	816	733	624
21	430	412	400	345	336	768	466	1,150	1,730	792	733	604
22	425	391	395	345	345	822	439	1,300	1,770	700	705	593
23	421	378	390	349	353	846	450	1,620	1,780	672	683	598
24	425	395	390	349	357	768	430	1,640	1,800	672	672	624
25	425	430	385	349	357	810	443	1,640	1,710	689	651	630
26	425	386	360	349	336	929	457	1,800	1,510	700	640	604
27	484	366	374	341	320	1,070	480	2,260	1,370	700	635	588
28	578	391	345	304	345	1,080	518	2,260	1,300	694	656	578
29	568	391	336	310	-	1,140	563	1,810	1,300	662	651	568
30	528	504	378	325	-	1,040	655	1,570	1,200	640	645	558
31	538	-	365	325	-	840	-	1,460	-	656	635	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						14,932	640	421	482		29,620	
November.....						13,094	514	378	436		25,970	
December.....						11,455	471	320	370		22,720	
Calendar year 1940 .....						231,967	1,960	-	634		460,100	
January.....						10,497	395	304	339		20,820	
February.....						9,417	357	320	356		18,680	
March.....						19,831	1,140	324	640		39,660	
April.....						15,448	744	430	515		30,640	
May.....						44,008	2,260	694	1,420		87,290	
June.....						46,220	2,050	1,200	1,541		91,680	
July.....						26,178	1,130	640	944		51,920	
August.....						22,243	683	635	718		44,120	
September.....						17,914	640	558	597		35,530	
Water year 1940-41 .....						251,237	2,260	304	688		498,300	

\* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 11-26, Jan. 4-17, Jan. 29 to Feb. 8.

Diversions from Teton River between St. Anthony gaging station and mouth, Idaho

Between St. Anthony gaging station and mouth, 17 canals divert water from Teton River for irrigation. Records available for part of each irrigation season from 1919 to 1941. Records of discharge of canals combined to show total diverted flow. During July, August and September, records computed from daily staff-gage readings and are good. During May and June, records computed or interpolated from daily or bi-weekly readings and are fair.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								231	1,110	1,000	733	511
2								251	1,110	959	688	510
3								241	1,070	851	697	495
4								552	1,100	920	661	501
5								346	1,130	864	664	505
6								365	1,100	818	675	549
7								369	969	796	708	540
8								371	985	799	758	550
9								317	971	821	776	541
10								346	962	863	846	549
11								397	954	874	738	547
12								466	922	876	605	526
13								569	1,040	847	623	521
14								788	1,180	724	605	500
15								995	1,210	801	569	512
16								1,000	1,220	790	545	520
17								1,020	1,220	774	528	510
18								1,080	1,240	805	531	496
19								1,100	1,240	761	543	497
20								1,140	1,250	846	566	521
21								1,180	1,250	849	565	520
22								1,220	1,250	762	573	521
23								1,250	1,250	684	558	430
24								1,340	1,250	680	511	428
25								1,350	1,240	681	508	394
26								1,290	1,210	681	494	307
27								1,200	1,200	669	501	302
28								1,210	1,160	697	508	297
29								1,160	1,090	656	497	297
30								1,140	1,080	670	502	297
31								1,150	-	641	506	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....								-	-	-	-	-
February.....								-	-	-	-	-
March.....								-	-	-	-	-
April.....								-	-	-	-	-
May.....								25,180	1,340	231	812	49,940
June.....								33,963	1,250	922	1,132	67,360
July.....								24,456	1,000	641	789	48,510
August.....								18,782	846	494	606	37,250
September.....								14,194	550	297	473	28,150
The period.....								-	-	-	-	231,200

## Blackfoot River near Blackfoot, Idaho

Location.- Water-stage recorder, lat. 43°08', long. 112°28', at east quarter corner of sec. 28, T. 3 S., R. 34 E., about 2 miles upstream from mouth and 9 miles southwest of Blackfoot. Altitude of gage, 4,420 feet (river profile survey).

Drainage area.- 1,100 square miles.

Records available.- July 1913 to September 1941.

Extremes.- Maximum discharge during year, 331 second-feet Nov. 21 (gage height, 4.20 feet); no flow on several days.  
1913-41: Maximum discharge, 868 second-feet May 21, 1921; no flow on many days.

Remarks.- Records good except those for period of ice effect, which are poor, and those for periods of no gage-height record, which are fair. Flow regulated by Blackfoot Marsh Reservoir (capacity, 413,000 acre-feet). Many diversions above station for irrigation. Most of the flow during the nonirrigation season and part of that during the irrigation season is supplied by waste from Snake River canals.

Cooperation.- Gage-height record furnished by Office of Indian Affairs.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	236	176	b200			a180	233	165	245	15	1	1
2	233	137					202	156	242	11	1	0
3	239	142					195	151	190	10	2	0
4	237	111					240	155	115	6	17	0
5	224	48					261	168	64	1	6	0
6	201	52				†184	280	178	51	1	5	1
7	228	74					303	174	57	1	5	1
8	228	77					267	144	98	1	8	4
9	226	122					215	62	98	4	5	12
10	200	168					189	27	167	2	6	14
11	176	156				a184	189	21	219	1	5	13
12	173	161					213	34	76	1	197	11
13	170	219					210	24	24	1	152	8
14	174	297					221	14	5	1	34	31
15	168	282					210	9	0	1	58	37
16	172	237				a190	180	7	0	1	220	32
17	165	130					191	4	1	1	160	37
18	121	236					201	3	1	1	139	36
19	70	228					174	19	9	1	124	36
20	86	251					144	34	12	1	41	41
21	87	312					117	14	17	1	6	43
22	90	287					96	3	15	1	4	91
23	96	282					66	0	13	3	4	91
24	124						192	39	0	4	11	126
25	126						a193	41	0	1	25	132
26	135	b250					a194	54	13	1	19	a2 151
27	182						a195	60	14	1	7	a2 168
28	189						a196	90	22	1	3	a2 150
29	216						197	151	42	14	2	a2 147
30	239						210	168	115	13	2	103
31	207	-					221	-	202	-	1	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							5,418	239	70	175	10,750	
November.....							5,985	312	48	200	11,870	
December.....							5,150	-	-	166	10,210	
Calendar year .....							-	-	-	-	-	
January.....							4,650	-	-	150	9,220	
February.....							4,200	-	-	150	8,350	
March.....							5,846	-	-	189	11,600	
April.....							5,200	303	39	173	10,310	
May.....							1,974	202	0	63.7	3,920	
June.....							1,754	245	0	58.5	3,480	
July.....							1,135	25	1	4.4	268	
August.....							1,215	220	1	38.2	2,410	
September.....							1,515	168	0	50.5	3,000	
Water year 1940-41 .....							45,042	312	0	118	85,370	

† Result of discharge measurement.

a Fragmentary gage-height record; discharge computed on basis of partial record, weather records, and discharge measurements.

b Stage-discharge relation affected by ice.

## Mud Lake near Terretton, Idaho

Location.- Water-stage recorder, lat. 43°53', long. 112°24', in SW $\frac{1}{4}$  sec. 1, T. 6 N., R. 34 E., 2 miles north of first Owsley pump house, 2 $\frac{1}{2}$  miles northeast of Terretton, and 14 miles southwest of Hamer; supplemental staff gage at pump house. Datum of each gage is 4,775.33 feet above mean sea level.

Records available.- April 1921 to September 1941.

Extremes.- Maximum daily contents during year, 30,900 acre-feet Apr. 30, May 1 (gage height, 6.60 feet); minimum daily, 1,470 acre-feet Oct. 1 (gage height, -1.23 feet).  
1921-41: Maximum contents observed, 61,660 acre-feet May 5, 1923 (gage height, 9.20 feet); practically no storage Oct. 1 to Nov. 15, 1937 (at 4 p.m. Nov. 15 water was diverted from Camas Creek into lake).

Remarks.- Mud Lake is a perched body of water confined by earth dikes and fed by ground water and surface tributaries. For complete description of Mud Lake region see Water-Supply Paper 818. Water for irrigation is diverted from lake and tributaries by pumping and gravity. Camas Creek diversion canal reported in operation Oct. 1 to Nov. 1 and July 17 to Sept. 30. Area of lake is varied from time to time by changes in dikes. High winds occasionally disturb the recording of lake stages. Figures given herein represent contents above gage height, -4.0 feet. Capacity table prepared from surveys made by Geological Survey adjusted for changes in dikes.

Cooperation.- Water-stage recorder record furnished by watermaster for Mud Lake and staff-gage record by Owsley Canal Co.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,470	3,610	7,330	11,900	16,600	a20,600	24,400	30,900	18,900	9,120	3,650	3,230
2	1,540	3,590	7,440	12,000	16,800	20,800	24,600	30,800	18,600	8,350	3,570	3,180
3	1,550	3,580	7,530	12,100	17,000	21,000	a24,700	30,800	18,200	8,560	3,540	3,180
4	1,720	3,930	7,710	12,300	17,100	21,300	a24,800	30,700	17,700	8,300	3,500	3,200
5	1,820	4,030	7,830	12,600	17,200	a21,400	24,900	30,600	17,400	8,020	3,430	a3,150
6	1,900	4,170	7,980	12,900	17,400	21,400	25,800	30,500	16,800	7,710	3,360	a3,100
7	1,980	4,230	8,110	13,100	17,500	21,500	26,000	30,300	16,400	7,470	3,370	a3,080
8	2,080	4,360	8,230	13,200	17,600	21,700	26,200	30,200	16,200	7,190	3,160	a3,010
9	2,150	4,430	8,390	13,400	17,700	21,900	26,400	30,000	15,900	6,880	3,200	2,960
10	2,220	4,600	8,560	13,500	17,800	21,900	26,700	30,100	15,600	6,590	3,230	2,990
11	2,270	4,780	8,750	13,700	18,000	22,000	27,000	29,900	15,300	6,250	a3,260	2,890
12	2,300	4,900	8,920	13,800	18,100	22,200	27,500	29,600	14,900	6,000	a3,290	2,920
13	2,430	5,010	8,980	14,000	18,300	22,400	27,800	29,100	14,600	5,800	a3,320	2,940
14	2,460	5,120	9,080	14,200	18,500	22,400	27,800	28,600	14,300	5,480	a3,350	2,840
15	2,510	5,230	9,290	14,200	18,600	22,500	27,900	28,200	14,300	5,250	a3,380	2,860
16	2,590	5,340	9,460	14,500	18,800	22,600	28,300	27,700	13,600	5,050	3,410	2,940
17	2,640	5,480	9,630	14,600	18,800	22,900	28,800	26,900	13,200	4,830	3,410	2,910
18	2,720	5,580	9,800	14,800	18,900	a22,900	29,000	26,600	12,800	4,620	3,410	2,840
19	2,770	5,780	9,910	15,000	19,000	22,900	29,100	26,000	12,500	4,540	3,480	2,870
20	2,820	5,900	10,100	15,100	a19,200	23,100	29,300	25,100	12,300	4,540	3,460	2,870
21	2,820	6,080	10,200	15,300	19,400	23,300	29,400	24,500	12,100	4,450	3,500	2,890
22	2,910	6,150	10,300	15,400	a19,600	23,400	29,600	23,900	11,800	4,310	3,520	a2,850
23	2,970	6,280	10,400	15,600	19,800	a23,600	29,800	23,500	11,500	4,210	3,540	a2,810
24	2,920	6,410	10,500	15,600	19,900	23,700	29,900	22,500	11,100	4,210	3,570	a2,770
25	2,980	6,540	11,000	15,700	20,000	23,700	30,100	22,000	10,900	4,190	3,550	a2,730
26	3,110	6,670	11,100	16,000	20,100	23,800	30,300	21,600	10,600	4,110	3,580	a2,700
27	3,060	6,770	11,300	16,000	20,300	23,900	30,400	20,900	10,300	4,050	3,460	a2,660
28	3,180	6,910	11,500	16,100	20,400	24,100	30,700	20,400	9,950	3,930	3,460	a2,620
29	3,230	7,070	11,700	16,300	-	a24,100	30,800	19,900	9,740	3,910	3,370	a2,580
30	3,360	7,210	11,800	16,400	-	24,100	30,900	19,500	9,420	3,860	3,200	2,540
31	3,370	-	12,000	16,600	-	a24,200	-	19,100	-	3,740	3,320	-

a No gage-height record; contents interpolated.

Note.- Contents for period Jan. 1 to Apr. 6 mostly computed from readings of supplemental gage.

Monthly gage height and contents, water year October 1940 to September 1941

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	-1.27	1,410	-
Oct. 31.....	-0.02	3,370	+1,960
Nov. 30.....	+1.68	7,210	+3,840
Dec. 31.....	3.06	12,000	+4,790
Calendar year 1940.....	-	-	+1,500
Jan. 31.....	4.09	16,500	+4,500
Feb. 28.....	4.08	20,400	+3,900
Mar. 31.....	-	24,300	+3,900
Apr. 30.....	6.60	30,900	+6,700
May 31.....	4.63	19,100	-11,800
June 30.....	2.38	9,420	-9,680
July 31.....	0.18	3,740	-5,680
Aug. 31.....	-0.05	3,320	-420
Sept. 30.....	-0.51	2,540	-780
Water year 1940-41.....	-	-	+1,130



## Camas Creek at Eighteenmile Shearing Corral, near Kilgore, Idaho

Location.- Water-stage recorder, lat. 44°18', long. 111°52', in sec. 7, T. 11 N., R. 39 E., at county-road bridge at Eighteenmile Shearing Corral, just downstream from West Camas Creek, 7 miles south of Kilgore, and 18½ miles northeast of Dubois.

Drainage area.- 210 square miles.

Records available.- May 1937 to September 1941 (no winter records).

Extremes.- Maximum discharge recorded during year, 273 second-feet May 27 (gage height, 2.89 feet); minimum recorded, 8.2 second-feet Aug. 5 (gage height, 1.54 feet).  
1937-41: Maximum discharge, about 1,200 second-feet probably on May 2, 1938 (gage height, 4.70 feet, datum then in use, from floodmark), from rating curve extended above 600 second-feet; minimum recorded, 0.7 second-foot Aug. 19, 1940.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Diversions above and below station for irrigation and stock water.

Cooperation.- Water-stage recorder inspected by employee of Water District No. 66.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	15						a150	129	50	16	18
2	13	15						a150	123	40	14	17
3	14	17						a160	101	34	11	17
4	16	18						a160	85	31	9.8	19
5	15	16						a140	103	28	9.2	20
6	a14	15						118	120	24	10	19
7	a14	16						110	97	22	11	18
8	a14	19						105	120	22	9.8	17
9	a13	-						116	134	22	9.2	18
10	a13	-						123	a108	19	10	18
11	a13	-						108	83	16	13	18
12	a13	-						112	75	16	14	18
13	13	-						123	68	16	15	18
14	13	-						154	64	16	18	20
15	13	-						216	73	16	16	19
16	13	-						218	70	15	14	17
17	14	-						156	61	14	12	18
18	14	†10						126	62	14	12	16
19	13	-						131	52	13	13	17
20	13	-						123	68	14	18	17
21	14	-						103	56	16	20	18
22	14	-						93	44	17	20	20
23	14	-						91	36	16	19	24
24	14	-						97	31	15	20	26
25	14	-						101	28	15	22	26
26	14	-						129	26	16	20	24
27	14	-						236	24	18	22	24
28	15	-						249	22	19	20	22
29	15	-						200	28	17	20	20
30	16	-						168	46	16	18	20
31	16	-						143	-	16	18	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				432	16	13	13.9	887				
November 1-8.....				131	19	15	16.4	260				
December.....				-	-	-	-	-				
Calendar year .....				-	-	-	-	-				
January.....				-	-	-	-	-				
February.....				-	-	-	-	-				
March.....				-	-	-	-	-				
April.....				-	-	-	-	-				
May.....				-	-	-	-	-				
June.....				4,405	249	91	142	8,740				
July.....				2,127	134	22	70.9	4,220				
August.....				623	80	13	20.1	1,240				
September.....				473.0	22	9.2	15.3	938				
Water year .....				583	26	16	19.4	1,160				

a No gage-height record; discharge computed on basis of records for station at Camas and other nearby stations.

† Result of discharge measurement.

## MUD LAKE BASIN

Camas Creek at Camas, Idaho

Location.- Water-stage recorder, lat. 44°00', long. 112°13', in E½SE¼ sec. 21, T. 8 N., R. 36 E., 350 feet upstream from Oregon Short Line R.R. bridge at Camas and half a mile upstream from Beaver Creek.

Records available.- April 1925 to September 1941.

Average discharge.- 15 years (1926-41), 16.2 second-feet.

Extremes.- Maximum discharge during year, 210 second-feet Apr. 17; maximum gage height, 3.23 feet Apr. 5; no flow at times during year.  
1925-41: Maximum discharge, 900 second-feet probably May 3, 1938 (gage height, 3.98, datum then in use, from floodmark), from rating curve extended above 400 second-feet; no flow June 1-7, 1926, and during many periods in the years 1930-41.

Remarks.- Records good except those Oct. 1 to Mar. 28, which are poor. Diversions above station for irrigation and stock water.

Cooperation.- Gage-height record furnished by watermaster for Mud Lake.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							52	78	69	1		
2							53	65	60	6		
3							74	65	53	6		
4							112	66	42	3		
5							168	68	31	2		
6							147	60	35	1		
7							103	49	50	0		
8							94	37	45	0		
9						1	110	28	44	0		
10							129	29	58	0		
11							143	28	39	0		
12							129	23	26	0		
13							129	21	19	0		
14							143	22	17	0		
15							106	33	14	0		
16		1	0.5	1	1		153	74	15	0		
17						2	186	81	15	0		
18						5	114	55	12	0		
19						10	83	43	6	0		
20						10	66	44	8	0		
21						10	74	42	6	0		
22						10	94	33	7	0		
23						h12	125	28	3	0		
24						h18	139	24	1	0		
25						13	125	23	0	0		
26						13	116	27	0	0		
27						13	123	40	0	0		
28						13	110	98	0	0		
29					-	13	119	117	0	0		
30					-	16	91	99	0	0		
31		-			-	29	-	83	-	0		
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						30	-	-	1.0	60		
December.....						15.5	-	-	.50	31		
Calendar year 1940.....						5,963.5	230	0	16.3	11,840		
January.....						31	-	-	1.0	61		
February.....						29	-	-	1.0	56		
March.....						203	29	-	6.5	403		
April.....						3,410	186	52	11.4	6,760		
May.....						1,581	117	21	51.0	3,140		
June.....						672	69	0	22.4	1,330		
July.....						19	6	0	.6	38		
August.....						0	0	0	0	0		
September.....						0	0	0	0	0		
Water year 1940-41.....						5,989.5	186	0	16.4	11,880		

h Computed on basis of staff-gage readings.

Note.- No gage-height record Oct. 1 to Mar. 22, Mar. 25-28; discharge computed on basis of field estimates, weather records, observer's notes, and records for other stations.

## Beaver Creek at Spencer, Idaho

Location.- Staff gage, lat. 44°21', long. 112°11', in NE¼ sec. 23, T. 12 N., R. 36 E., at highway bridge, 0.4 mile southeast of Spencer post office and 2½ miles upstream from Rattlesnake Creek.

Drainage area.- 120 square miles.

Records available.- October 1940 to September 1941.

Extremes.- Maximum discharge observed during year, 161 second-feet Mar. 31; gage heights of more than 5.4 feet (upper limit of gage) occurred several times during period of ice effect Mar. 17-21; minimum discharge observed, 1.6 second-feet (result of discharge measurement) Dec. 15.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Several ranch diversions above station. Gage read twice daily.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.4	3	2.0	24	2.9	99
1.6	8	2.3	45	3.2	129
1.8	14	2.6	71	3.5	161

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		6	(*)				129	46	41	27	8	9
2		7					114	45	40	17	7	8
3		7					94	44	35	20	5	8
4		6					84	55	36	18	5	9
5		6					80	51	35	15	4	9
6		a5					53	45	38	20	4	e
7		9					50	42	52	15	4	10
8		10					51	45	61	12	3	14
9						b5	49	47	47	13	4	11
10							58	44	38	12	6	11
11							60	43	33	10	8	10
12							51	41	26	10	10	10
13	4						50	44	27	8	13	10
14	4						51	51	26	9	10	10
15	4						49	71	29	11	8	10
16	4		*b5	b5	b5		51	57	29	10	7	9
17	4					b10	39	51	28	8	6	8
18	3	(*)				b20	44	51	24	7	7	6
19	3					b30	51	51	30	9	9	6
20	3	b6				b30	38	45	24	17	12	6
21	3					b30	36	36	22	14	14	6
22	3					b30	66	35	18	11	14	7
23	3					*b40	59	36	16	8	12	16
24	3					b50	54	33	15	7	12	12
25	3					b40	71	40	15	7	12	10
26	4					b50	61	71	15	14	14	8
27	5					b60	54	76	15	11	12	8
28	6					76	53	50	14	10	12	8
29	5				-	104	52	44	20	9	11	8
30	6				-	139	44	42	33	9	10	8
31	6	-		(*)	-	150	-	38	-	8	9	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						136	-	-	4.4	270		
November.....						168	-	-	6.3	373		
December.....						155	-	-	5.0	307		
Calendar year .....						-	-	-	-	-		
January.....						155	-	-	5.0	307		
February.....						140	-	-	5.0	278		
March.....						939	150	-	30.3	1,860		
April.....						1,795	129	36	59.8	3,560		
May.....						1,470	76	33	47.4	2,920		
June.....						884	61	14	29.5	1,750		
July.....						376	27	7	12.1	746		
August.....						272	14	3	8.8	540		
September.....						273	16	6	9.1	541		
Water year 1940-41.....						6,783	150	-	18.6	13,450		

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

b Stage-discharge relation affected by ice.

## Beaver Creek at Dubois, Idaho

Location.- Water-stage recorder, lat. 44°11', long. 112°14', in NW¼ sec. 21, T. 10 N., R. 36 E., half a mile north of Dubois:

Drainage area.- 220 square miles.

Records available.- April 1921 to September 1941.

Average discharge.- 14 years (1921-24, 1928-29, 1931-41), 13.1 second-feet.

Extremes.- Maximum discharge during year, 188 second-feet Mar. 28 (gage height, 2.15 feet); no flow during long periods.

1921-41: Maximum discharge, 858 second-feet Apr. 7, 1930; maximum gage height, about 6.5 feet Mar. 16, 1926; no flow during long periods.

Remarks.- Records good except those for periods of fragmentary or no gage-height record, which are poor. Diversions above station for irrigation.

Cooperation.- Gage-height record furnished by watermaster for Mud Lake.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

0.1	0	0.8	7	1.6	79
.2	.1	1.0	14	1.9	136
.4	.8	1.3	38	2.2	198
.6	3				

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	126	12	26	6.2		
2						0	103	14	23	2.3		
3						0	76	20	16	0		
4						0	56	30	13	0		
5						0	52	29	14	0		
6						0	39	26	17	0		
7						0	28	22	a25	0		
8						0	24	20	a30	0		
9						0	22	23	a20	0		
10						0	23	16	a15	0		
11						0	28	14	a10	0		
12						0	26	14	7.0	0		
13						0	20	26	5.5	0		
14						0	14	31	4.5	0		
15						0	10	50	4.9	0		
16						a2	a5.0	44	7.3	0		
17						f20	a4.0	36	5.1	0		
18						19	a3.0	30	4.2	0		
19						25	3.0	35	3.3	0		
20						24	6.8	51	6.6	0		
21						19	14	24	2.4	0		
22						21	19	20	.2	0		
23						25	18	15	0	0		
24						f45	13	13	0	0		
25						f35	18	13	0	0		
26						39	33	19	0	0		
27						71	24	55	0	0		
28						124	20	40	0	0		
29						130	16	31	1.3	0		
30						146	14	24	7.9	0		
31						138	-	24	-	0		
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						0	0	0	0	0		
December.....						0	0	0	0	0		
Calendar year 1940.....						1,076.6	113	0	2.94	2,130		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						893	146	0	28.5	1,760		
April.....						857.8	128	3.0	28.6	1,700		
May.....						801	55	12	25.8	1,590		
June.....						269.2	30	0	8.97	534		
July.....						8.5	6.2	0	.27	17		
August.....						0	0	0	0	0		
September.....						0	0	0	0	0		
Water year 1940-41.....						2,819.5	146	0	7.72	5,590		

a No gage-height record; discharge computed on basis of information furnished by observer, weather records, and records for station at Spencer.

f Fragmentary gage-height record; discharge computed from partially estimated gage heights.

## Beaver Creek at Camas, Idaho

Location.- Staff gage, lat.  $44^{\circ}01'$ , long.  $112^{\circ}14'$ , in NE $\frac{1}{4}$  sec. 21, T. 8 N., R. 36 E., a quarter of a mile northwest of Oregon Short Line R. R. station at Camas and three-eighths of a mile upstream from mouth.

Records available.- April 1921 to September 1941.

Extremes.- Maximum discharge observed during year, 52 second-feet Apr. 1 (gage height, 2.12 feet); no flow on most days.

1921-41: Maximum discharge observed, 163 second-feet Apr. 7, 1930; usually no flow past station except for short period in spring of each year; none passed station during years 1931-36 and 1940.

Remarks.- Records good. Flow affected by diversions above Dubois, about 14 miles above gage, and by heavy channel losses below Dubois. Gage read twice daily.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	48					
2						0	26					
3						0	13					
4						0	5					
5						0	3					
6						0	3					
7						0	0					
8						0	0					
9						0	0					
10						0	0					
11						0	0					
12						0	0					
13						0	0					
14						0	0					
15						0	0					
16						0	0					
17						0	0					
18						0	0					
19						0	0					
20						0	0					
21						0	0					
22						0	0					
23						0	0					
24						0	0					
25						0	0					
26						0	0					
27						0	0					
28						0	0					
29						28	0					
30						38	0					
31						39	-					
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						0	0	0	0	0		
December.....						0	0	0	0	0		
Calendar year 1940 .....						0	0	0	0	0		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						105	39	0	3.4	208		
April.....						98	48	0	3.3	194		
May.....						0	0	0	0	0		
June.....						0	0	0	0	0		
July.....						0	0	0	0	0		
August.....						0	0	0	0	0		
September.....						0	0	0	0	0		
Water year 1940-41 .....						203	48	0	.6	402		

## MUD LAKE BASIN

## Medicine Lodge Creek near Argora, Idaho

Location.- Water-stage recorder, lat. 44°19', long. 112°34', in sec. 34, T. 12 N., R. 33 E., at Albano Ranch, 2½ miles southeast of Argora.

Drainage area.- About 160 square miles.

Records available.- November 1938 to September 1941.

Extremes.- Maximum discharge during year, 113 second-feet Aug. 19, from rating curve extended above 60 second-feet; maximum gage height, 1.66 feet Dec. 13 (affected by ice); minimum discharge, 9 second-feet Dec. 14 (gage height, 0.53 foot).  
1938-41: Maximum discharge observed, 166 second-feet Mar. 22, 1939 (gage height, 1.80 feet), from rating curve extended above 50 second-feet; minimum recorded, that of Dec. 14, 1940.

Remarks.- Records fair except those for periods of ice effect or no gage-height record, which are poor. Several diversions above station for irrigation.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.5	8	0.9	32	1.3	76
.7	17	1.1	52		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	16	32	31	34	27	43	a20	52	a61	47	48
2	26	13	b31	b25	22	27	40	a25	51	a59	46	46
3	28	14	a31	b18	28	26	32	32	49	a57	a46	47
4	27	14	a31	b18	18	25	25	35	51	a57	a45	46
5	26	14	a31	20	18	26	25	35	57	57	a45	45
6	26	15	a31	22	20	26	23	43	57	57	a45	45
7	25	16	a31	26	23	26	21	50	64	55	a44	46
8	25	17	a31	29	24	26	20	52	68	55	a44	46
9	25	17	a31	32	27	26	20	54	57	52	a45	46
10	24	16	a20	30	28	25	21	52	56	50	48	46
11	24	18	b15	27	28	24	22	a49	55	50	63	45
12	23	19	b10	23	29	27	21	50	57	51	61	43
13	20	19	b10	21	26	26	21	52	57	52	54	44
14	18	23	b9	28	27	28	20	54	58	55	51	45
15	16	25	10	29	30	27	20	57	63	56	50	45
16	16	29	12	28	24	27	21	52	58	54	48	46
17	15	30	15	29	24	34	22	52	59	55	47	45
18	12	30	18	29	23	40	20	50	58	54	48	44
19	12	27	a20	29	26	42	21	51	59	52	56	44
20	12	27	a25	29	26	42	a20	48	58	55	55	44
21	11	29	a30	29	26	33	a20	44	55	51	52	44
22	10	25	32	28	26	37	a20	40	57	50	51	44
23	10	23	32	28	26	37	a20	40	68	48	54	45
24	10	25	32	27	26	27	a20	41	66	48	54	45
25	10	28	32	27	24	29	a20	43	65	50	51	43
26	15	32	31	28	22	38	a20	54	66	55	52	43
27	16	38	31	26	26	40	a20	44	64	50	50	42
28	15	36	28	22	27	34	a20	38	69	50	50	42
29	14	34	29	28	-	38	a20	38	a65	49	49	42
30	15	32	30	32	-	38	a20	42	a65	48	48	42
31	16	-	31	28	-	47	-	49	-	48	49	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						569	28	10	18.4	1,130		
November.....						701	38	13	23.4	1,390		
December.....						782	32	9	25.2	1,550		
Calendar year 1940.....						8,800	38	9	24.0	17,450		
January.....						826	32	18	26.6	1,640		
February.....						710	34	18	25.4	1,410		
March.....						975	47	24	31.5	1,930		
April.....						878	43	20	22.6	1,340		
May.....						1,384	57	20	44.6	2,750		
June.....						1,781	68	49	59.4	3,530		
July.....						1,641	61	48	52.9	3,250		
August.....						1,548	63	44	49.9	3,070		
September.....						1,340	48	42	44.7	2,660		
Water year 1940-41.....						12,935	68	9	35.4	25,650		

a No gage-height record; discharge computed on basis of weather records and records for station at Ellis Ranch.

b Stage-discharge relation affected by ice.

c Computed from staff-gage reading.

## Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho

Location.- Water-stage recorder, lat. 44°17', long. 112°30', in sec. 7, T. 11 N., R. 34 E., 4 miles upstream from Middle Creek, 6½ miles southwest of Argora, and 17 miles northwest of Dubois. Prior to November 16, 1940, staff gage 1,000 feet upstream.

Records available.- October 1940 to September 1941.

Extremes.- Maximum discharge during period, 129 second-feet July 14 (gage height, 3.23 feet); minimum, 9 second-feet Dec. 12 (gage height, 1.17 feet).

Remarks.- Records good except those based on staff-gage readings, which are fair. Several diversions above and below station for irrigation. Gage read once daily Oct. 19 to Nov. 15.

Rating tables, water year 1940-41 (gage height, in feet, and discharge,  
in second-feet)  
(Shifting-control method used Nov. 16 to Dec. 12)

Oct. 19 to Nov. 15

Nov. 16 to Sept. 30

1.3	12	1.1	7.3	2.3	60
1.5	18	1.3	13	2.6	90
1.7	26	1.5	21	2.9	101
1.9	35	1.7	29	3.3	133
		2.0	44		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	19	34	34	21	32	40	22	53	63	51	52
2	-	18	33	16	18	34	38	25	48	60	51	52
3	-	18	33	15	17	34	34	27	48	59	50	52
4	-	17	33	15	16	32	27	31	50	59	49	53
5	-	18	33	18	16	32	29	34	53	59	48	52
6	-	18	33	19	20	34	27	42	53	58	48	51
7	-	18	33	22	22	33	25	50	60	57	46	52
8	-	18	34	25	24	32	20	53	67	59	46	52
9	-	18	34	28	31	31	19	53	59	55	49	52
10	-	18	18	31	36	27	23	53	58	54	53	52
11	-	13	14	29	34	25	25	52	58	58	59	51
12	-	13	10	27	35	22	23	53	59	59	52	50
13	-	17	10	22	31	25	22	58	59	58	56	50
14	-	22	10	33	34	23	21	57	59	64	55	50
15	-	24	10	38	29	26	21	60	65	62	54	50
16	-	28	10	34	28	32	23	58	62	59	53	49
17	-	26	11	34	33	38	23	55	60	58	53	49
18	-	28	12	34	29	46	22	54	59	58	53	48
19	16	22	17	34	34	49	22	54	59	58	53	48
20	16	23	25	34	33	48	23	52	58	60	57	49
21	16	29	31	33	33	40	22	49	56	58	56	49
22	17	18	37	33	33	42	21	44	56	56	55	48
23	15	17	38	33	33	45	20	43	68	54	56	51
24	15	18	37	34	33	35	20	44	64	54	58	50
25	14	27	36	33	32	35	24	44	64	55	56	49
26	20	29	36	33	27	42	20	52	66	61	55	48
27	19	36	36	28	31	47	20	48	64	56	54	48
28	18	34	29	26	31	40	21	42	66	54	53	48
29	18	34	33	32	-	36	21	43	69	53	53	48
30	a19	34	36	28	-	38	22	44	66	52	53	48
31	20	-	36	24	-	47	-	49	-	52	53	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 19-31.....	223	20	14	17.2	442
November.....	674	36	15	22.5	1,540
December.....	832	38	10	26.8	1,650
Calendar year .....	-	-	-	-	-
January.....	879	38	15	28.4	1,740
February.....	798	36	17	26.5	1,580
March.....	1,101	48	22	35.5	2,190
April.....	716	40	19	25.9	1,420
May.....	1,442	60	22	46.5	2,860
June.....	1,786	69	43	59.5	3,540
July.....	1,782	64	52	57.5	3,530
August.....	1,654	62	46	53.4	3,280
September.....	1,501	53	48	50.0	2,980
The period.....	-	-	-	-	26,540

a No gage-height record; discharge interpolated.

## Medicine Lodge Creek near Small, Idaho

Location.- Water-stage recorder, lat. 44°16', long. 112°25', in NW¼ sec. 25, T. 11 N., R. 34 E., 400 feet west of H. W. Small's ranch house, 1 mile downstream from Indian Creek, 4 miles northwest of Small, and 11 miles northwest of Dubois. October 18 to November 16, 1940, staff gage at practically same site but at datum 1.99 feet lower. Former gage (1921-23) at site 100 feet downstream at different datum.

Drainage area.- 270 square miles.

Records available.- April 1921 to December 1923, October 1940 to September 1941.

Extremes.- Maximum discharge during period, 101 second-feet May 15; maximum gage height recorded, 5.60 feet (ice jam) Jan. 17; minimum discharge observed, 8 second-feet (result of discharge measurement) Dec. 14.

1921-23, 1940-41: Maximum discharge recorded, 196 second-feet June 1, 1921 (gage height, 2.8 feet, site and datum then in use); minimum, that of Dec. 14, 1940.

Remarks.- Records good except those prior to Nov. 12, which are fair, and those for periods of ice effect, which are poor. Many small diversions above and below station for irrigation. Gage read once daily October 18 to Nov. 16.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	28	(*)		(*)	42	58	44	82	78	59	54
2	-	26				42	54	48	77	75	58	53
3	-	26				42	45	52	73	72	57	54
4	-	26				a42	40	57	74	72	55	56
5	-	26				a42	40	62	79	70	54	53
6	-	27				a42	39	67	79	69	54	55
7	-	29				a42	40	74	83	66	52	54
8	-	29				a41	37	77	94	69	52	55
9	-	29				40	35	77	85	66	53	55
10	-	28				39	36	79	82	63	55	54
11	-	26				39	42	79	80	65	69	51
12	-	b28				40	38	83	80	68	77	50
13	-	b26				43	38	91	79	66	70	51
14	-	b28	(*)			51	37	95	79	70	66	51
15	-					45	37	96	82	60	63	52
16	-		b30	b35	b35							
17	-					49	37	95	82	67	61	52
18	24	(*)				55	37	95	80	66	60	51
19	24					a55	34	94	79	64	61	52
20	24					a57	33	93	81	65	66	50
21	24					a67	38	91	78	68	66	52
22	24	b35				a50	39	86	76	66	63	52
23	23					a55	37	76	73	62	60	52
24	23					58	37	76	62	59	60	54
25	23					47	37	76	79	59	63	55
26	24					46	41	77	77	69	60	55
27	28					54	40	85	79	68	60	51
28	28					63	36	85	76	63	59	50
29	27					58	40	76	79	61	57	50
30	27					57	40	74	86	62	66	50
31	26	-				52	42	74	84	61	55	50
						65	-	76	-	59	66	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October 18-31.....						354	26	23	25.3	702		
November.....						946	-	-	31.5	1,880		
December.....						950	-	-	30.0	1,840		
Calendar year .....						-	-	-	-	-		
January.....						1,085	-	-	35.0	2,180		
February.....						960	-	-	35.0	1,940		
March.....						1,514	65	39	48.8	3,000		
April.....						1,188	58	33	39.6	2,360		
May.....						2,412	98	44	77.8	4,780		
June.....						2,399	94	73	80.0	4,780		
July.....						2,058	80	59	66.4	4,080		
August.....						1,671	77	52	60.4	3,710		
September.....						1,570	56	50	52.3	3,110		
The period.....						-	-	-	-	34,310		

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for stations upstream.

b Stage-discharge relation affected by ice.



## Little Lost River near Howe, Idaho

Location.- Water-stage recorder, lat. 43°53', long. 113°06', in sec. 3, T. 6 N., R. 28 E., a quarter of a mile upstream from diversion dam of Blaine County Investment Co., 6 miles northwest of Berenice, and 7 miles northwest of Howe.

Records available.- April 1921 to September 1941, except during winters.

Extremes.- Maximum discharge during year, 150 second-feet June 2; maximum gage height recorded, 4.70 feet Jan. 19 (ice effect); minimum discharge observed, 4.1 second-feet Dec. 12 (discharge measurement).

1921-41: Maximum discharge, about 450 second-feet Aug. 11, 1936, during cloudburst (gage height, 3.1 feet, datum then in use, from floodmark), from rating curve extended above 100 second-feet; minimum observed, that of Dec. 12, 1940.

Remarks.- Records good. Many diversions above and below station for irrigation. Prior to 1937 water was stored in small reservoir of Blaine County Investment Co. on Dry Creek, about 40 miles above station, and during irrigation seasons was released and carried through Corral and Wet Creeks to Little Lost River, from which it was diverted into the company's main canal a quarter of a mile below station.

Cooperation.- Gage-height record furnished by watermaster for Little Lost River.

Rating tables, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 10

Feb. 20 to Sept. 30

2.3	32.5	2.1	16	2.9	96
2.4	42	2.3	31	3.1	125
2.5	52.5	2.5	49.5	3.3	156
2.6	64	2.7	71		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	48			-	24	61	75	145	69	47	46
2	45	49			-	25	56	81	143	67	44	45
3	50	50			-	24	57	56	137	68	40	48
4	52	47			-	22	53	93	137	75	38	43
5	49	48			-	24	54	91	131	72	37	46
6	47	55			-	24	52	88	126	67	37	44
7	46	58			-	25	47	97	134	62	35	49
8	44	58			-	25	45	84	136	70	33	54
9	41	56			-	25	47	94	131	66	35	53
10	41	47			-	26	57	76	119	58	51	53
11	42	-			-	27	53	78	109	53	57	51
12	43	-	†4.1		-	29	49	81	103	58	78	51
13	41	-			-	29	48	95	102	53	92	52
14	42	-			-	30	48	106	104	61	82	54
15	42	-			-	30	47	114	107	58	71	54
16	42	-			-	34	51	109	110	55	59	53
17	44	-			-	43	53	106	106	60	54	53
18	42	-			-	57	49	107	109	57	67	52
19	40	-			-	59	46	120	103	58	76	50
20	41	-			22	55	50	114	104	71	69	56
21	42	-			22	41	51	109	96	69	70	59
22	43	-			22	42	51	109	86	59	60	54
23	47	-			22	48	52	120	82	55	56	58
24	46	-			22	44	56	122	84	51	54	60
25	46	-			20	43	62	128	83	51	53	55
26	56	-			b19	46	60	134	78	51	58	54
27	61	-			b19	61	61	136	70	51	54	53
28	55	-			20	64	64	138	72	53	48	53
29	51	-		†31	-	63	66	142	76	52	47	53
30	50	-			-	70	71	142	70	47	46	52
31	49	-			-	68	-	143	-	46	46	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,434	61	40	46.3	2,840		
November 1-10.....						516	58	47	51.6	1,020		
December.....						-	-	-	-	-		
Calendar year .....						-	-	-	-	-		
January.....						-	-	-	-	-		
February 20-28.....						188	22	19	20.9	373		
March.....						1,227	70	22	39.6	2,430		
April.....						1,617	71	45	55.9	3,210		
May.....						3,298	143	75	106	6,540		
June.....						3,193	145	70	106	6,330		
July.....						1,843	75	46	59.5	3,660		
August.....						1,694	92	33	54.6	3,360		
September.....						1,563	60	44	52.1	3,100		
Water year .....						-	-	-	-	-		

† Result of discharge measurement.

b Stage-discharge relation affected by ice.

## LITTLE LOST RIVER BASIN

Blaine County Investment Co.'s canal near Howe, Idaho

Location.- Staff gage and Cippoletti weir, lat. 43°53', long. 113°05', in NW¼ sec. 11, T. 6 N., R. 28 E., 665 feet downstream from head gates and 7 miles northwest of Howe.

Records available.- April 1924 to September 1941 (prior to 1939, irrigation seasons only).

Extremes.- Maximum discharge observed during year, 53 second-feet Mar. 28 (gage height, 2.60 feet); no flow during long periods.

1924-41: Maximum discharge observed, 87 second-feet May 24, 25, 1928; no flow at times.

Remarks.- Records good except those for Mar. 5-19, which are poor. Canal diverts water from Little Lost River in sec. 2, T. 6 N., R. 28 E., for irrigation of lands in project of Blaine County Investment Co. Gage read once daily.

Cooperation.- Gage-height record and results of one discharge measurement furnished by watermaster for Little Lost River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	7.1				0	40	0	56	3.3		
2	7.6	14				0	37	0	38	3.3		
3	9.0	15				0	30	4.8	33	1.1		
4	10	17				0	27	11	31	0		
5	9.6	18				1	28	11	30	0		
6	8.9	27				2	21	11	26	0		
7	8.9	29				2	17	11	30	0		
8	8.6	34				2	10	11	31	0		
9	7.9	34				2	11	11	36	0		
10	5.3	34				2	14	11	34	0		
11	4.4	all				2	13	11	24	4.1		
12	4.4	0				2	7.2	11	19	4.1		
13	4.4	0				1	.3	14	19	4.1		
14	4.0	0				1	.2	22	22	4.1		
15	3.8	0				1	.2	22	22	4.1		
16	3.8	0				1	.1	21	22	4.1		
17	3.8	0				1	.1	20	22	4.1		
18	3.8	0				1	0	21	23	4.1		
19	3.8	0				1	0	26	23	4.1		
20	3.5	0				17	0	26	24	5.5		
21	3.8	0				27	0	23	21	6.0		
22	1.2	0				37	0	22	14	4.3		
23	0	0				34	0	26	14	4.3		
24	0	0				30	0	26	14	3.3		
25	0	0				31	0	28	14	3.3		
26	0	0				31	0	30	14	3.3		
27	0	0				48	0	33	9.9	3.3		
28	0	0				53	0	33	5.6	3.3		
29	0	0				50	0	33	5.3	3.3		
30	0	0				46	0	35	4.9	1.4		
31	0	-				46	-	35	-	.1		
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	132.5		12		0		4.27		263			
November.....	240.1		34		0		6.00		476			
December.....	0		0		0		0		0			
Calendar year 1940.....	889.7		34		0		2.43		1,760			
January.....	0		0		0		0		0			
February.....	0		0		0		0		0			
March.....	471		53		0		15.2		954			
April.....	256.1		40		0		8.54		508			
May.....	599.8		35		0		19.3		1,190			
June.....	659.7		36		4.9		22.0		1,310			
July.....	85.8		6.0		0		2.77		170			
August.....	0		0		0		0		0			
September.....	0		0		0		0		0			
Water year 1940-41.....	2,445.0		53		0		6.70		4,850			

Note.- Discharge Mar. 5-19 computed on basis of data furnished by watermaster and one field estimate; Nov. 11, Apr. 12-16, July 30, 31 computed on basis of field estimates and known gate changes.

## Big Lost River at Howell Ranch, near Chilly, Idaho

Location.- Water-stage records, lat. 44°01', long. 114°00', in sec. 30, T. 8 N., R. 21 E., at Howell Ranch, 9 miles southwest of Chilly and 21 miles northwest of Mackay.

Records available.- April 1904 to August 1906, July 1907 to November 1914, and May 1920 to September 1941, except during winters.

Extremes.- Maximum discharge recorded during year, 1,530 second-feet May 27 (gage height, 3.52 feet); minimum observed, 31 second-feet (result of discharge measurement) Dec. 10, but may have been less during winter.

1904-14, 1920-41: Maximum discharge, 3,500 second-feet June 12, 1921 (gage height, 5.94 feet), from rating extended above 3,000 second-feet; minimum observed, 19 second-feet (result of discharge measurement) Dec. 12, 1939.

Remarks.- Records good. No regulation. Several small diversions above station. Hammerly ditch (capacity, about 20 second-feet) diverts a quarter of a mile below station.

Cooperation.- Gage-height record furnished by watermaster for Big Lost River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	198	145					-	469	760	584	197	158
2	206	147					-	473	722	604	189	155
3	231	140					-	523	820	644	177	160
4	215	135					-	541	858	651	169	153
5	200	114					-	500	835	610	163	147
6	191	132					-	443	826	598	168	142
7	185	130					-	414	994	637	150	142
8	180	126					-	405	1,090	624	150	142
9	180	130					-	396	946	583	160	142
10	177	110	†31				-	447	866	473	197	135
11	174	-					h104	610	914	438	341	135
12	171	-					a100	994	1,040	396	565	137
13	169	-					a100	1,260	1,170	396	443	135
14	163	-					a105	1,090	1,220	396	331	135
15	158	-					a110	906	1,260	396	254	a135
16	150	-					a110	790	1,220	379	260	a135
17	145	-					a110	790	1,170	359	243	a135
18	140	-					a105	1,000	1,130	350	243	a135
19	135	-					100	835	1,220	354	227	a135
20	130	-					110	722	1,050	401	221	a145
21	130	-					116	612	930	339	224	a145
22	130	-					121	1,030	986	319	250	a145
23	135	-					155	1,220	1,070	309	240	a145
24	132	-					200	1,440	1,020	264	218	a145
25	147	-					194	1,400	938	263	206	142
26	177	-					247	1,440	752	256	203	142
27	191	-					297	1,440	708	247	191	142
28	171	-					346	1,130	672	256	190	137
29	160	-					394	938	604	243	174	132
30	150	-					463	850	572	221	171	130
31	145	-					-	828	-	209	163	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						5,156	231	130	166	10,230		
November 1-10.....						1,309	147	110	131	2,600		
December.....						-	-	-	-	-		
Calendar year .....						-	-	-	-	-		
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March.....						-	-	-	-	-		
April 11-30.....						3,567	463	100	178	7,080		
May.....						26,156	1,440	395	644	51,830		
June.....						28,365	1,220	872	946	56,260		
July.....						12,798	651	209	413	25,360		
August.....						7,067	565	150	229	14,060		
September.....						4,241	160	130	141	8,410		
Water year .....						-	-	-	-	-		

† Result of discharge measurement.

a No gage-height record; discharge computed on basis of weather records and records for stations on nearby streams.

h Computed from staff-gage reading.

## BIG LOST RIVER BASIN

Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°59', long. 113°45', in sec. 32, T. 8 N., R. 23 E., above flow line of reservoir, 3 miles upstream from Mackay Dam, and about 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1941.

Average discharge.- 22 years, 49.6 second-feet.

Extremes.- Maximum discharge during year, 560 second-feet May 27; maximum gage height, 3.85 feet June 20 (backwater from Mackay Reservoir); minimum daily discharge, 1 second-foot Feb. 13 to May 13.

1919-41: Maximum discharge, 1,320 second-feet June 7, 1938 (gage height, 5.02 feet); no flow during long periods in each year of 1920, 1923-38, and 1940.

Remarks.- Records good except those for period of backwater from Mackay Reservoir and those below 10 second-feet which are fair. Diversions above station for irrigation. The sum of the combined discharge of east and west channels of Big Lost River and of the combined discharge of east and west channels of Warm Spring Creek, near Mackay, represents practically entire surface flow of Big Lost River which enters Mackay Reservoir.

Cooperation.- Gage-height record furnished by watermaster for Big Lost River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	4	4	3	2	1	1	1	290	220	38	35
2	4	h3	4	3	2	1	1	1	270	215	36	34
3	4	3	4	3	2	1	1	1	270	228	33	33
4	4	3	4	3	2	1	1	1	300	247	30	30
5	4	3	4	3	2	1	1	1	320	243	28	29
6	4	4	4	3	2	1	1	1	310	224	25	28
7	4	4	4	2	2	h1	1	1	350	200	24	27
8	4	4	4	2	2	1	1	1	380	193	22	26
9	3	h4	h4	2	2	1	1	1	370	178	23	25
10	h3	4	4	2	2	1	h1	1	340	168	24	25
11	3	4	4	2	2	1	1	1	320	150	32	24
12	h3	4	4	2	2	1	1	1	330	158	46	23
13	3	3	4	2	1	1	1	1	62	370	134	67
14	3	3	4	2	1	1	1	1	142	410	155	61
15	3	3	4	2	1	1	1	1	166	440	136	52
16	3	h3	4	2	1	1	1	1	186	440	128	47
17	3	3	4	2	1	1	1	1	197	430	123	50
18	3	3	4	2	1	1	h1	1	243	430	120	48
19	h3	3	4	2	1	1	1	1	269	440	120	47
20	3	3	4	2	1	1	1	1	235	460	130	47
21	3	3	4	h2	1	1	1	1	233	410	122	47
22	3	3	4	2	1	1	1	1	271	350	105	46
23	4	3	4	2	1	1	1	1	335	350	92	47
24	4	3	3	2	1	1	1	1	404	360	78	47
25	4	3	3	2	1	1	1	1	478	370	71	46
26	4	3	3	2	1	1	1	1	504	340	62	46
27	4	3	3	2	1	1	1	1	532	290	54	44
28	4	4	3	2	1	1	1	1	428	270	52	42
29	4	4	3	2	-	1	1	1	358	250	47	40
30	4	4	3	2	-	1	1	1	324	237	43	38
31	4	-	3	2	-	1	-	-	313	-	42	36
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						111	5	3	3.6	220		
November.....						101	4	3	3.4	200		
December.....						116	4	3	3.7	230		
Calendar year 1940.....						15,402	440	0	42.1	30,550		
January.....						68	3	2	2.2	135		
February.....						40	2	1	1.4	79		
March.....						31	1	1	1.0	61		
April.....						30	1	1	1.0	60		
May.....						5,672	532	1	183	11,260		
June.....						10,477	460	237	349	20,780		
July.....						4,187	247	42	135	8,300		
August.....						1,289	67	22	40.6	2,500		
September.....						730	35	21	24.3	1,450		
Water year 1940-41.....						22,822	532	1	62.5	45,260		

h Computed from staff-gage readings.

Note.- No gage-height record Oct. 1-4, 7-25, Nov. 1 to May 12, Sept. 5, 10-12, 17-19 except for staff gage readings on days indicated; discharge interpolated or computed on basis of records for nearby stations. Backwater from Mackay reservoir June 1-29; discharge computed on basis of gage-height record, reservoir record, discharge measurement, and records for nearby stations.

Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 113°45', in sec. 5, T. 7 N., R. 23 E., above flow line of reservoir, 3 miles upstream from Mackay Dam, and about 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1941.

Average discharge.- 22 years 55.3 second-feet.

Extremes.- Maximum discharge during year, 299 second-feet May 27 (gage height, 3.42 feet); minimum, 31 second-feet May 6 (gage height, 1.88 feet).  
1919-41: Maximum discharge, 1,200 second-feet (estimated), sometime during period June 5-16, 1921 (gage height, 4.45 feet, site and datum then in use); minimum, 9 second-feet May 22, 26, 1935.

Remarks.- Records good except those for period of backwater from Mackay Reservoir, which are fair. Diversions above station for irrigation. The sum of the combined discharge of east and west channels of Big Lost River and the combined discharge of east and west channels of Warm Spring Creek, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir. This summation is published on the following page.

Cooperation.- Gage-height record furnished by watermaster for Big Lost River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	50	46	42	43	40	35	33	183	130	59	59
2	54	51	46	42	43	40	35	33	173	128	54	59
3	56	51	46	a42	43	40	36	33	170	131	54	59
4	53	51	46	43	43	39	35	33	180	139	54	57
5	52	51	46	43	43	38	35	33	190	141	54	56
6	51	51	46	43	a42	36	35	32	185	133	54	57
7	51	51	46	43	a40	36	35	32	190	125	54	57
8	52	50	46	43	39	36	34	33	200	122	54	57
9	51	50	46	a42	39	36	34	34	195	117	57	57
10	51	50	46	a42	39	36	35	33	190	110	57	57
11	52	50	47	41	39	36	35	33	180	106	65	56
12	52	48	47	41	a39	36	35	33	185	103	68	56
13	52	a48	46	41	a39	35	35	43	195	98	76	60
14	52	a48	46	41	a39	35	34	91	200	100	79	60
15	52	a47	46	a41	39	35	34	117	205	102	74	59
16	52	47	46	a42	39	a35	33	125	205	98	69	59
17	52	47	46	a43	a39	a35	33	133	205	97	67	57
18	52	47	44	43	a39	a35	33	151	200	96	65	57
19	53	47	44	43	a39	a34	33	166	211	98	64	59
20	53	47	43	41	a39	a34	33	169	215	102	61	59
21	52	47	43	41	a39	a34	33	154	185	104	61	59
22	52	47	43	41	39	34	33	161	175	100	60	59
23	52	47	44	41	39	34	34	178	180	92	60	59
24	52	47	44	41	39	34	34	209	180	86	61	59
25	52	47	a44	41	39	33	34	244	190	79	61	59
26	53	47	a44	41	39	34	34	260	170	76	63	57
27	52	46	a45	41	40	34	34	290	155	74	63	57
28	52	46	43	41	40	34	34	248	159	71	61	57
29	51	46	43	41	-	34	34	207	152	67	61	56
30	50	46	43	41	-	34	33	192	136	64	61	57
31	50	-	42	41	-	34	-	189	-	61	60	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,615	56	50	52.1	3,200		
November.....						1,448	51	46	48.3	2,870		
December.....						1,391	47	42	44.9	2,760		
Calendar year 1940.....						20,142	185	25	55.0	39,950		
January.....						1,293	43	41	41.7	2,560		
February.....						1,118	43	39	39.9	2,220		
March.....						1,100	40	33	35.5	2,180		
April.....						1,024	36	33	34.1	2,030		
May.....						3,712	290	32	120	7,360		
June.....						5,539	215	136	185	10,990		
July.....						3,150	141	61	102	6,250		
August.....						1,911	79	54	61.6	3,790		
September.....						1,736	60	56	57.9	3,440		
Water year 1940-41.....						25,037	290	32	68.6	49,650		

a No gage-height record; discharge interpolated.

Note.- Backwater from Mackay Reservoir June 3-27; discharge computed on basis of discharge measurement, gage-height record, reservoir record, and records for nearby stations.

Combined discharge, in second-feet, of Big Lost River (east and west channels) and Warm Spring Creek (east and west channels) above Mackay Reservoir near Mackay, Idaho, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	178	168	159	152	150	146	134	110	647	493	192	223
2	179	168	159	153	150	146	134	110	606	485	184	220
3	182	165	159	153	150	145	134	108	606	504	181	216
4	174	164	159	154	149	144	131	107	659	539	178	208
5	172	164	159	154	150	141	134	108	697	536	174	207
6	171	165	159	154	148	137	130	106	675	503	170	206
7	172	167	159	153	146	137	129	107	711	463	167	201
8	171	166	158	153	145	139	128	109	791	451	167	199
9	169	166	157	152	146	139	129	109	771	426	175	200
10	169	166	157	152	146	139	131	106	721	394	178	199
11	170	166	158	151	146	139	129	105	681	380	211	198
12	172	164	159	151	146	139	124	106	698	362	238	196
13	172	161	158	151	144	136	124	174	767	352	261	199
14	172	161	159	150	144	136	122	322	826	359	255	197
15	173	162	157	150	145	136	119	383	869	361	236	194
16	172	162	157	151	145	136	120	413	870	347	225	196
17	172	162	158	152	145	138	120	440	855	343	229	194
18	172	162	153	152	144	138	118	517	849	343	225	194
19	174	162	153	152	144	138	116	565	879	354	223	194
20	174	160	152	150	143	138	117	527	904	372	222	193
21	173	160	154	148	143	137	120	514	802	372	224	192
22	172	160	154	148	143	137	121	561	715	337	220	190
23	173	159	155	148	143	135	121	657	722	304	221	196
24	172	159	155	148	144	135	121	803	732	278	222	196
25	172	159	156	148	144	133	122	949	761	271	228	194
26	178	159	155	148	144	134	122	1,010	697	249	233	190
27	176	158	155	148	143	133	122	1,100	615	237	231	189
28	173	161	153	147	145	133	122	918	603	228	231	189
29	170	161	153	147	-	133	118	765	569	214	231	187
30	167	159	153	147	-	133	110	697	521	205	228	188
31	168	-	153	147	-	133	-	679	-	197	224	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					5,354	182	167	173	10,620			
November.....					4,876	168	158	163	9,670			
December.....					4,845	159	152	156	9,610			
Calendar year 1940.....					73,190	805	88	200	145,200			
January.....					4,664	154	147	150	9,250			
February.....					4,075	150	143	146	8,080			
March.....					4,265	146	133	138	8,460			
April.....					3,722	134	110	124	7,380			
May.....					13,285	1,100	105	429	26,350			
June.....					21,818	904	521	727	43,280			
July.....					11,259	539	197	363	22,330			
August.....					6,582	261	167	212	13,060			
September.....					5,945	223	187	198	11,790			
Water year 1940-41.....					90,688	1,100	105	248	179,900			

## Mackay Reservoir near Mackay, Idaho

Location.- Staff gage on head-gate tower of dam on Big Lost River, lat. 43°57', long. 113°40', in sec. 12, T. 7 N., R. 23 E., 4 miles northwest of Mackay. Datum of gage is 6,000 feet above mean sea level.

Records available.- January 1919 to September 1941.

Extremes.- Maximum contents observed during year, 40,980 acre-feet June 20 (gage height, 63.98 feet); minimum observed, 6,801 acre-feet Oct. 1 (gage height, 26.60 feet). 1919-41: Maximum contents observed, 41,270 acre-feet May 30, 1938 (gage height, 64.20 feet); no available storage during periods in each of the years 1919, 1920, 1924, 1926, 1929, 1931-35; minimum gage height observed, 6.3 feet Aug. 5, 1934.

Remarks.- Reservoir is formed by earth and rock fill dam, which was reconstructed 1917-18; storage impounded by original dam not recorded. Capacity is 38,400 acre-feet between gage heights 7.0 feet (bottom of outlet tunnel) and 62.0 feet (crest of spillway). Flash boards about 1 foot high have been installed on crest of dam at times. Dead storage reported to be about 125 acre-feet. Water is used for irrigation of lands in Big Lost River irrigation district. Considerable seepage around dam because of its porous foundation, but the greater part of this water returns to Big Lost River between the reservoir and station below reservoir, near Mackay. Figures given herein represent usable contents, computed for midnight on basis of once-daily readings of staff gage.

Cooperation.- Gage-height record and capacity table furnished by watermaster for Big Lost River.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,964	11,590	17,640	22,610	26,020	28,260	29,920	31,070	37,530	37,340	28,020	22,570
2	7,169	11,510	17,800	22,770	26,130	28,540	29,970	31,100	38,280	37,280	27,380	22,450
3	7,360	11,970	17,940	22,880	26,190	28,410	30,030	31,120	38,580	37,580	26,750	22,360
4	7,559	12,140	18,080	22,970	26,260	28,490	30,080	31,140	38,920	37,570	25,960	22,140
5	7,819	12,360	18,390	23,100	26,410	28,630	30,140	31,150	39,270	37,640	25,040	22,140
6	8,060	12,600	18,540	23,230	26,570	28,690	30,180	31,140	39,540	37,640	24,150	22,140
7	8,272	12,810	18,680	23,370	26,680	28,630	30,210	31,130	39,850	37,510	23,330	22,140
8	8,534	13,100	18,880	23,480	26,730	28,700	30,240	31,110	40,310	37,330	22,870	22,180
9	8,758	13,330	19,070	23,560	26,780	28,730	30,280	31,120	40,630	37,140	21,810	22,200
10	8,916	13,540	19,230	23,640	26,870	28,760	30,330	31,130	40,450	36,950	20,410	22,260
11	9,040	13,720	19,330	23,710	26,960	28,810	30,350	31,130	40,290	36,500	19,310	22,400
12	9,201	13,970	19,510	23,830	27,030	28,850	30,360	30,970	40,280	36,050	20,060	22,530
13	9,402	14,160	19,680	23,970	27,080	28,920	30,420	30,910	40,420	35,640	20,860	22,630
14	9,561	14,310	19,840	24,140	27,130	29,000	30,470	30,930	40,570	35,310	21,150	22,730
15	9,618	14,540	20,040	24,310	27,210	29,070	30,530	30,940	40,730	35,010	21,270	22,680
16	9,631	14,730	20,230	24,460	27,300	29,120	30,570	30,950	40,790	34,710	21,460	22,610
17	9,695	14,980	20,400	24,560	27,370	29,160	30,620	31,180	40,870	34,490	21,750	22,580
18	9,772	15,130	20,560	24,650	27,460	29,200	30,660	31,440	40,900	34,400	21,890	22,570
19	9,836	15,330	20,680	24,740	27,550	29,260	30,720	31,540	40,920	34,340	22,000	22,570
20	9,945	15,600	20,790	24,870	27,610	29,320	30,770	31,580	40,960	34,320	22,210	22,560
21	10,020	15,760	20,950	25,010	27,660	29,380	30,810	31,600	40,750	34,240	22,380	22,530
22	10,080	15,950	21,100	25,120	27,750	29,470	30,880	31,680	40,640	34,010	22,490	22,550
23	10,120	16,160	21,310	25,210	27,880	29,550	30,930	31,820	40,410	33,660	22,550	22,660
24	10,190	16,320	21,480	25,310	27,970	29,600	30,900	32,230	40,110	33,270	22,600	22,810
25	10,230	16,490	21,600	25,430	28,030	29,650	30,930	32,950	39,770	32,890	22,650	22,990
26	10,350	16,700	21,740	25,560	28,090	29,690	30,950	33,510	39,320	32,370	22,690	23,150
27	10,500	16,950	21,890	25,650	28,150	29,740	30,970	34,520	38,830	31,790	22,730	23,290
28	10,640	17,140	22,040	25,740	28,210	29,780	30,990	35,650	38,440	31,050	22,740	23,440
29	10,800	17,310	22,250	25,830	-	29,820	31,030	36,200	37,910	30,270	22,720	23,630
30	10,010	17,470	22,380	25,890	-	29,840	31,050	36,740	37,490	29,460	22,700	23,790
31	11,230	-	22,470	25,940	-	29,870	-	37,350	-	28,720	22,670	-

Monthly gage height and contents, water year October 1940 to September 1941

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	26.51	6,754	-
Oct. 31.....	33.86	11,230	+4,476
Nov. 30.....	42.13	17,470	+6,240
Dec. 31.....	47.75	22,470	+5,000
Calendar year 1940.....	-	-	+3,990
Jan. 31.....	51.23	25,940	+3,470
Feb. 28.....	53.36	28,210	+2,270
Mar. 31.....	54.87	29,870	+1,660
Apr. 30.....	55.91	31,050	+1,180
May 31.....	61.19	37,380	+6,330
June 30.....	61.28	37,490	+110
July 31.....	53.83	28,720	-8,770
Aug. 31.....	47.96	22,670	-6,050
Sept. 30.....	49.10	23,790	+1,120
Water year 1940-41.....	-	-	+17,036

## BIG LOST RIVER BASIN

Big Lost River below Mackay Reservoir, near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 113°38', in sec. 18, T. 7 N., R. 24 E., 450 feet downstream from Oleson Suspension Bridge, 1 mile downstream from head of Sharp ditch, 1½ miles downstream from Mackay Reservoir, and 2½ miles northwest of Mackay.

Records available.- December 1903 to August 1906, May 1912 to March 1915, and January 1919 to September 1941. April 1913 to March 1915 at site 1 mile downstream.

Average discharge.- 25 years (1904-5, 1912-14, 1919-41), 254 second-feet.

Extremes.- Maximum discharge during year, 958 second-feet June 24 (gage height, 3.39 feet); minimum, 58 second-feet Nov. 9; minimum gage height, 1.43 feet Nov. 9-11. 1903-6, 1912-15, 1919-41: Maximum discharge, 2,990 second-feet June 10, 1921 (gage height, 5.79 feet); minimum, 18 second-feet Nov. 1, 1934; minimum gage height, 1.23 feet Nov. 5-8, 1926.

Remarks.- Records good. Sharp ditch is only diversion between station and reservoir; many above reservoir. Flow regulated by Mackay Reservoir (see p. 73).

Cooperation.- Gage-height record furnished by watermaster for Big Lost River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	70	72	98	115	127	127	104	338	619	575	278
2	77	70	72	101	115	127	127	104	347	525	565	298
3	75	70	75	101	115	124	127	104	413	476	565	307
4	75	68	77	101	115	124	127	104	476	442	602	264
5	75	60	80	104	115	127	127	104	486	481	656	231
6	75	60	80	104	118	127	127	104	500	510	630	231
7	77	60	80	104	118	127	127	106	530	510	630	231
8	77	60	80	104	118	127	127	109	592	520	641	197
9	80	58	82	104	118	127	124	109	685	520	630	165
10	82	60	82	104	118	127	124	109	685	525	619	166
11	82	60	85	104	121	127	124	109	652	545	518	166
12	82	63	85	104	121	127	121	170	646	570	355	182
13	98	63	85	104	121	127	121	216	685	570	176	172
14	109	65	85	115	121	127	121	288	775	565	176	172
15	121	63	85	115	121	127	121	361	806	540	179	186
16	133	63	87	112	121	127	121	365	835	486	162	212
17	149	63	85	109	121	127	121	417	835	456	149	212
18	182	63	87	109	124	127	121	432	865	427	165	212
19	152	65	87	112	124	130	121	452	885	398	179	212
20	152	68	85	109	124	130	124	456	895	398	179	212
21	149	68	85	109	124	130	124	510	865	427	179	212
22	142	68	85	109	124	130	121	550	805	456	186	190
23	133	68	85	109	124	130	124	608	805	456	194	166
24	133	68	87	112	124	130	121	624	968	476	194	156
25	130	68	87	112	124	130	121	630	925	496	208	124
26	136	70	90	112	124	130	121	592	925	535	228	124
27	136	70	90	112	124	130	124	555	895	580	231	121
28	130	72	90	112	124	127	124	525	865	597	231	121
29	70	72	93	115	-	127	121	447	835	630	245	118
30	70	72	96	115	-	127	112	389	745	636	255	118
31	72	-	98	115	-	127	-	351	-	608	255	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,333	152	70	108	6,610		
November.....						1,966	72	58	65.5	3,900		
December.....						2,622	98	72	84.6	5,200		
Calendar year 1940.....						80,020	835	54	219	158,700		
January.....						3,350	115	98	108	6,640		
February.....						3,376	124	115	121	6,700		
March.....						3,958	130	124	128	7,850		
April.....						3,693	127	112	123	7,320		
May.....						10,084	630	104	325	20,000		
June.....						21,533	958	338	718	42,710		
July.....						15,980	636	398	515	31,700		
August.....						10,715	641	149	346	21,260		
September.....						5,684	307	118	189	11,270		
Water year 1940-41.....						86,294	958	58	236	171,800		



## Warm Spring Creek (east channel) near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., 700 feet upstream from confluence with west channel of Warm Spring Creek, and about 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1941.

Average discharge.- 22 years, 27.9 second-feet.

Extremes.- Maximum discharge during year, 98 second-feet May 27 (gage height, 2.60 feet); minimum, 11 second-feet May 12 (gage height, 1.42 feet).  
1919-41: Maximum discharge, 225 second-feet June 15, 1922; minimum, 9 second-feet May 8, 9, 13, and 14, 1919, and May 18-21, 1920.

Remarks.- Records good. Practically all natural flow diverted during irrigation season. Flow during summer represents return water from irrigation. The sum of the combined discharge of east and west channels of Warm Spring Creek and the combined discharge of east and west channels of Big Lost River, near Mackay, Idaho, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir.

Cooperation.- Gage-height record furnished by watermaster for Big Lost River.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control methods used October 1 to Jan. 7, Sept. 15-30)

1.4	11	2.2	62
1.6	18	2.4	79
1.8	30	2.6	98
2.0	45		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	20	17	17	17	17	15	12	51	39	20	28
2	22	20	17	17	17	17	15	12	46	38	19	27
3	23	19	17	17	17	17	15	12	46	40	19	27
4	21	19	17	17	17	17	15	12	52	43	19	26
5	21	19	17	17	17	16	15	12	57	43	19	27
6	21	18	17	17	17	16	15	12	55	41	19	27
7	21	18	17	17	17	16	15	12	61	37	19	26
8	20	18	17	17	17	16	15	12	71	36	19	26
9	20	18	17	17	17	16	15	12	66	34	20	26
10	20	18	17	17	17	16	15	12	58	32	20	26
11	20	18	17	17	17	16	15	12	51	30	24	27
12	21	18	17	17	17	16	14	12	53	30	23	26
13	20	18	17	17	17	16	14	13	62	29	23	26
14	20	18	17	17	17	16	14	17	71	30	23	26
15	21	18	17	17	17	16	14	21	74	30	26	25
16	21	18	17	17	17	16	14	22	75	29	24	26
17	21	18	17	17	17	16	14	24	74	29	25	26
18	21	18	17	17	17	16	14	23	73	30	25	26
19	21	18	17	17	17	16	13	35	78	33	24	25
20	21	18	17	17	17	16	14	33	79	35	24	24
21	21	18	17	17	17	16	14	30	67	37	25	24
22	20	18	17	17	17	16	14	32	60	32	26	23
23	21	17	17	17	17	16	13	39	62	28	26	24
24	20	17	17	17	17	16	13	57	62	26	26	24
25	20	17	18	17	17	15	14	74	66	25	26	23
26	21	17	18	17	17	15	14	83	60	24	27	23
27	21	17	18	17	16	15	14	96	51	25	27	23
28	20	17	17	17	17	15	14	82	51	23	27	23
29	20	17	17	17	-	15	14	63	50	22	27	23
30	19	-	17	17	-	15	12	55	42	21	28	23
31	20	-	17	17	-	15	-	53	-	20	27	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	641	23	19	20.7	1,270
November.....	539	20	17	18.0	1,070
December.....	530	18	17	17.1	1,060
Calendar year 1940.....	7,069	55	10	19.3	14,010
January.....	527	17	17	17.0	1,060
February.....	475	17	16	17.0	942
March.....	493	17	15	15.9	978
April.....	426	15	12	14.2	845
May.....	1,001	96	12	32.3	1,990
June.....	1,822	79	42	60.7	3,610
July.....	971	45	20	31.3	1,930
August.....	741	28	19	23.9	1,470
September.....	755	28	23	25.2	1,500
Water year 1940-41.....	8,921	96	12	24.4	17,700

## BIG LOST RIVER BASIN

Warm Spring Creek (west channel) near Mackay, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., 500 feet upstream from confluence with east channel of Warm Spring Creek and about 7½ miles northwest of Mackay.

Records available.- May 1919 to September 1941.

Average discharge.- 22 years, 90.5 second-feet.

Extremes.- Maximum discharge during year, 185 second-feet May 27 (gage height, 2.15 feet); minimum, 59 second-feet May 11 (gage height, 1.17 feet).

1919-41: Maximum discharge, 600 second-feet (estimated) Aug. 11, 1936 (gage height, 4.42 feet, datum then in use, from high-water mark); minimum, 49 second-feet Apr. 27, 1935 (gage height, 0.62 foot, datum then in use).

Remarks.- Records good except those for period of backwater from Mackay Reservoir, which are fair. Flow during summer represents return flow from irrigation. The sum of the combined discharge of east and west channels of Warm Spring Creek and the combined discharge of east and west channels of Big Lost River, near Mackay, Idaho, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir.

Cooperation.- Gage-height record furnished by watermaster for Big Lost River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	94	92	90	88	88	83	64	123	104	75	101
2	99	94	92	91	88	88	83	64	117	104	75	100
3	99	92	92	91	88	87	82	62	119	105	75	97
4	96	91	92	91	87	87	80	61	127	110	75	95
5	95	91	92	91	88	86	83	62	130	109	73	95
6	95	92	92	91	87	84	79	61	125	105	72	94
7	96	94	92	91	87	84	78	62	130	101	70	91
8	95	94	a91	91	87	86	a78	63	140	100	72	90
9	95	94	h90	91	88	86	a79	62	140	97	75	92
10	95	94	a90	91	88	86	80	60	135	94	77	91
11	95	94	a90	91	88	86	78	59	130	94	90	91
12	96	94	a91	91	88	86	74	60	130	91	96	91
13	97	92	91	91	87	84	74	a66	140	91	90	90
14	97	92	92	90	87	84	73	72	145	94	87	88
15	97	94	90	90	88	84	70	79	150	94	84	88
16	96	94	90	90	88	84	72	80	150	92	83	90
17	96	94	91	90	88	86	72	86	146	94	87	90
18	96	94	88	90	87	86	70	95	146	97	97	90
19	97	94	88	90	87	87	69	105	150	103	98	88
20	97	92	*	88	90	86	69	100	150	105	90	88
21	97	92	90	88	86	86	72	97	140	109	91	88
22	97	92	90	88	86	86	73	97	130	100	88	87
23	96	92	90	88	86	84	a73	105	130	92	88	91
24	96	92	91	88	87	84	a73	133	130	88	88	90
25	96	92	91	86	87	84	a73	155	135	96	95	90
26	100	92	90	88	87	84	73	163	127	87	97	88
27	99	92	91	88	86	83	73	179	119	84	97	88
28	97	94	90	87	87	83	73	160	123	82	101	88
29	95	94	90	87	-	83	69	137	117	78	103	87
30	94	92	90	87	-	83	64	126	106	77	101	87
31	94	-	91	87	-	83	-	124	-	74	101	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				2,987	100	94	96.4	5,920				
November.....				2,788	94	91	92.9	5,530				
December.....				2,808	92	88	90.6	5,570				
Calendar year 1940.....				30,578	133	53	83.5	60,650				
January.....				2,776	91	87	89.5	5,510				
February.....				2,442	88	86	87.2	4,840				
March.....				2,639	88	83	85.1	5,230				
April.....				2,242	83	64	74.7	4,450				
May.....				2,897	179	59	93.5	5,750				
June.....				3,980	150	106	133	7,890				
July.....				2,951	110	74	95.2	5,850				
August.....				2,671	103	87	86.2	5,800				
September.....				2,724	101	87	90.8	5,400				
Water year 1940-41.....				33,905	179	59	92.9	67,240				

a No gage-height record; discharge interpolated.

h Computed from staff-gage reading.

Note.- Backwater from Mackay Reservoir June 5-25; discharge computed on basis of discharge measurements, gage-height record, reservoir record, and records for nearby stations.

## Sharp ditch near Mackay, Idaho

Location.— Water-stage recorder and sharp-crested weir, lat. 43°57', long. 113°39', in sec. 7, T. 7 N., R. 24 E., 1,600 feet downstream from head of ditch, three-quarters of a mile downstream from Mackay Reservoir, and 3½ miles northwest of Mackay.

Records available.— June 1912 to October 1914, March 1919 to September 1941.

Extremes.— Maximum discharge during year, 26 second-feet June 23 (gage height, 1.08 feet); no flow reported Apr. 18-26.

1912-14, 1919-41: Maximum discharge observed, 42 second-feet June 23, 1921; no flow at times.

Remarks.— Records good except those below 5 second-feet, which are fair. Sharp ditch diverts from east side of Big Lost River in SE¼ sec. 12, T. 7 N., R. 23 E., half a mile below Mackay Reservoir and 1 mile above station on Big Lost River below Mackay Reservoir, near Mackay. Water used for irrigation northwest of Mackay and above Streeter ditch. Hintze ditch diverts from Sharp ditch above station and, according to watermaster, carried 294 acre-feet during the year (49 in October, 25 in May, 67 in June, 24 in July, 69 in August, and 60 in September).

Cooperation.— Gage-height record furnished by watermaster from Big Lost River.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

0.0	0.0	0.4	5.4	0.8	16
.1	0.6	.5	7.6	.9	19
.2	1.0	.6	10	1.0	22
.3	3.4	.7	13	1.1	26

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	4.8				a0.5	0.6	a16	16	16	17	10
2	3.1	4.8				a.5	.6	a16	16	19	16	10
3	3.1	4.8				a.5	.6	h16	16	20	16	10
4	2.9	4.8				a.5	.6	a16	16	21	18	10
5	2.9	4.8				a.5	.6	a16	16	20	19	10
6	2.8	5.0				a.5	h.6	a16	16	20	19	10
7	2.8	5.0				h.5	a.5	a16	16	20	18	10
8	2.8	5.0				a.5	a.5	a13	17	20	18	10
9	2.9					a.6	a.5	a13	17	19	17	10
10	3.1					.6	.4	13	17	19	17	10
11	3.4		h1.3			.6	.4	13	16	19	16	10
12	3.4		a1.3			.6	.5	11	16	19	16	10
13	5.0		a1.3			.6	a.5	10	16	18	13	10
14	6.0		a1.3			.6	a.5	10	18	17	10	10
15	6.7		a1.3			.6	a.5	9.8	18	17	7.6	9.8
16	7.6					.6	a.5	9.0	18	17	7.2	10
17	9.0					.6	a.5	8.1	19	15	7.2	9.8
18	9.5					.6	0	8.1	20	13	7.2	10
19	9.5					.6	0	11	20	11	7.2	8.6
20	9.5					.6	0	15	20	11	9.0	6.7
21	9.8					.6	0	16	22	13	9.8	5.6
22	9.3					.6	0	16	24	14	10	5.6
23	8.6					.6	0	16	24	14	10	5.6
24	8.6					.6	0	16	25	14	10	5.4
25	8.6					.6	0	16	25	14	10	5.4
26	9.0					.6	a.6	16	25	14	10	5.4
27	8.5					.6	a.6	16	24	14	10	5.4
28	8.1					.6	a.6	16	22	15	10	5.4
29	4.6					.6	a.6	15	21	17	10	5.2
30	4.6					.6	a.6	13	19	16	10	5.2
31	4.6					.6	-	15	-	18	10	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	185.5	9.8	2.8	5.98	368
November.....	145.3	-	-	4.84	288
December.....	25.9	-	-	.84	51
Calendar year 1940.....	2,374.2	22	.4	6.49	4,710
January.....	12.4	-	-	.40	25
February.....	12.5	-	-	.45	25
March.....	17.8	.6	.5	.57	35
April.....	11.3	.6	0	.38	22
May.....	427	16	8.1	13.8	847
June.....	575	25	16	19.2	1,140
July.....	516	21	11	16.6	1,020
August.....	384.2	19	7.2	12.4	762
September.....	249.1	10	5.2	8.30	494
Water year 1940-41.....	2,562.0	25	0	7.02	5,080

a No gage-height record; discharge computed on basis of headgate charges and other data furnished by watermaster.

b Computed from staff-gage readings.



## Portneuf River at Pocatello, Idaho

Location.- Water-stage recorder, lat. 42°52', long. 112°28', in sec. 27, T. 6 S., R. 34 E., at highway bridge at foot of Carson Street, in west end of Pocatello.

Records available.- August 1911 to September 1941. May 1897 to October 1899 at site 1 mile upstream.

Average discharge.- 28 years, (1912-16, 1917-41), 247 second-feet.

Extremes.- Maximum discharge during year, 654 second-feet Mar. 4 (gage height, 5.70 feet); minimum discharge recorded, 48 second-feet July 16; minimum gage height recorded, 2.58 feet June 28.

1897-99, 1911-41: Maximum discharge, more than 2,000 second-feet sometime during period May 13 to June 14, 1917; minimum, 14 second-feet July 4-11, 13, 17, 18, 1898.

Remarks.- Records good except those for November to January, which are fair. Many diversions above station for irrigation. Flow regulated by storage reservoir near Chesterfield.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	113	107	218	216	191	427	427	416	132	80	77	108
2	116	104	210		223	493	427	416	130	70	76	108
3	113	100	204		216	526	406	427	119	70	80	106
4	116	97	201	b175	220	630	406	438	107	71	79	101
5	111	101	201		193	584	416	427	124	69	75	110
6	104	98	202		212	515	416	406	119	69	76	114
7	102	98	202		201	471	395	395	129	65	71	119
8	101	98	201		202	449	374	374	145	69	82	121
9	104	97	201		214	436	374	364	182	63	102	119
10	102	97	197		210	416	395	342	155	58	100	107
11	102	100	186	b200	246	384	427	353	124	58	107	108
12	102	113	(*)		311	353	427	364	137	59	102	110
13	104	108			364	332	438	384	134	59	108	100
14	101	126			384	311	460	384	126	62	108	102
15	93	130	b175	206	395	300	460	384	135	61	102	108
16	95	170		214	353	300	449	353	137	54	100	110
17	97	193		222	300	311	450	300	124	71	114	106
18	97	199		191	290	364	460	260	124	71	130	100
19	95	202	212	189	300	395	449	250	111	79	110	95
20	94	201	197	188	322	416	438	220	107	76	105	90
21	94	199	206	191	364	427	427	186	102	81	102	86
22	93	197	214	191	374	406	416	159	97	81	98	89
23	95	191	197	395	406	416	138	85	81	107	100	
24	90	186	223	197	427	416	427	127	80	80	104	105
25	89	182	270	*197	460	406	438	129	a74	80	102	118
26	98	189	246	204	460	384	449	140	a68	90	104	116
27	110	189	240	201	460	395	471	166	a63	93	108	113
28	121	189	250	193	449	395	438	164	b57	69	107	107
29	110	195	250	188	-	406	416	155	61	81	110	104
30	106	206	237	189	-	416	416	143	69	75	114	104
31	105	-	253	191	-	427	-	135	-	76	113	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					3,170	181	89	102	6,290			
November.....					4,462	206	97	149	8,550			
December.....					6,423	270	-	207	12,740			
Calendar year 1940.....					58,960	449	25	161	117,000			
January.....					6,065	222	-	196	12,030			
February.....					8,756	460	191	312	17,330			
March.....					12,899	630	300	416	25,580			
April.....					12,818	471	374	427	25,420			
May.....					8,899	438	127	287	17,650			
June.....					3,327	155	57	111	6,600			
July.....					2,240	93	54	72.3	4,440			
August.....					3,073	136	71	99.1	6,100			
September.....					3,181	121	86	106	6,510			
Water year 1940-41.....					75,293	630	54	206	149,300			

\* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

## PORTNEUF RIVER BASIN

Birch Creek near Downey, Idaho

Location.- Staff-gage and wooden control, lat. 42°21', long. 112°15', in SE¼ sec. 28, T. 12 S., R. 36 E., just downstream from point where flow that is diverted through Malad power plant re-enters stream, 8.6 miles southwest of Downey, and 10 miles upstream from confluence with Marsh Creek.

Records available.- September 1937 to September 1941. October 1911 to August 1914 at site 1¼ miles upstream.

Extremes.- Maximum discharge observed during year, 44 second-feet July 20 (gage height, 1.34 feet); minimum observed, 5.2 second-feet Nov. 27 and several times during December, January, and February (gage height, 0.72 foot).

1911-14, 1937-41: Maximum discharge observed, 95 second-feet July 15, 1938, by velocity-area method on basis of floodmark at measuring section; minimum observed, 3.4 second-feet Dec. 24-27, 1913.

Remarks.- Records good. Gage read twice daily. Malad power plant, which has a small reservoir above station, may cause slight diurnal fluctuations. Water is diverted from Birch Creek half a mile below station and carried by trans-mountain canal to Devil Creek in Bear River Basin.

Cooperation.- Gage-height record furnished by Western States Utility Co. in connection with a Federal Power Commission project.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Sept. 2-29)

.70	5.0	.87	7.9	1.10	18
.73	5.4	.91	9.0	1.15	23
.76	5.8	.95	10	1.20	28
.79	6.4	1.00	12		
.83	7.1	1.05	15		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	6.9	5.5	5.5	5.4	5.8	6.4	11	12	10	7.7	7.5
2	6.5	6.9	5.5	5.4	5.4	5.7	6.4	12	12	10	7.7	7.2
3	6.7	6.9	5.5	5.4	5.4	5.7	6.5	12	12	11	7.7	7.3
4	6.5	6.9	5.5	5.4	5.4	5.5	6.5	14	12	10	7.3	7.3
5	6.5	7.1	5.4	5.4	5.4	5.5	6.5	14	11	10	7.3	7.1
6	6.5	6.9	5.4	5.4	5.4	5.5	6.5	16	11	10	7.3	7.3
7	6.5	6.9	5.4	5.4	5.4	5.5	6.5	14	12	9.9	7.3	7.3
8	6.5	6.9	5.4	5.4	5.2	5.5	6.5	14	11	9.9	7.3	7.1
9	6.5	6.9	5.4	5.2	5.4	5.5	6.7	14	11	9.9	7.3	6.9
10	6.5	6.5	5.4	5.2	5.4	5.5	7.3	16	11	9.9	7.7	6.9
11	6.5	6.5	5.4	5.4	5.5	5.5	7.1	16	11	7.3	7.7	7.1
12	6.4	6.5	5.4	5.4	5.5	5.5	6.9	17	11	9.9	7.7	6.9
13	6.5	5.8	5.2	5.4	5.4	5.5	7.3	17	10	9.9	7.7	6.7
14	6.5	6.0	5.2	5.4	5.4	5.5	7.5	19	11	9.9	7.5	6.7
15	6.4	6.0	5.2	5.4	5.2	5.5	7.7	22	11	9.9	7.5	6.7
16	6.4	5.8	5.2	5.4	5.2	5.5	7.7	22	11	8.4	7.3	6.7
17	6.5	5.9	5.2	5.4	5.4	5.5	7.7	19	11	7.3	7.7	6.7
18	6.5	5.8	5.2	5.4	5.2	5.8	7.7	18	11	7.3	7.7	6.7
19	6.5	5.8	5.2	5.4	5.4	5.8	7.5	16	11	7.3	7.7	6.5
20	6.4	5.8	5.2	5.2	5.4	5.8	7.7	16	11	26	7.7	6.5
21	6.5	5.8	5.2	5.2	5.4	5.8	7.7	14	11	8.7	7.5	6.7
22	5.5	5.8	5.5	5.4	5.4	5.8	8.2	14	11	8.7	7.3	6.7
23	6.5	5.8	5.5	5.2	5.4	5.8	8.2	14	11	8.2	7.7	6.9
24	6.5	5.8	5.5	5.4	5.5	5.8	8.4	14	11	8.2	7.5	6.9
25	6.5	5.8	5.5	5.4	5.4	5.8	8.7	14	11	8.4	7.5	6.7
26	7.9	5.5	5.5	5.4	5.4	5.8	9.0	16	11	8.2	7.7	6.7
27	6.9	5.4	5.7	5.4	5.4	5.8	9.6	14	11	7.9	7.7	6.7
28	6.9	5.5	5.5	5.4	5.4	5.8	11	13	11	7.7	7.5	6.7
29	7.1	5.5	5.5	5.2	-	6.0	11	13	10	7.7	7.5	6.7
30	6.9	5.5	5.5	5.2	-	6.2	11	13	10	7.7	7.3	6.5
31	6.7	-	5.5	5.4	-	6.2	-	13	-	7.7	7.5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	204.7	7.9	6.4	6.60	406
November.....	185.0	7.1	5.4	6.17	367
December.....	187.2	5.7	5.2	5.39	332
Calendar year 1940.....	2,683.9	13	5.2	7.33	5,330
January.....	166.1	5.5	5.2	5.36	329
February.....	150.7	5.5	5.2	5.38	299
March.....	176.4	6.2	5.5	5.69	350
April.....	253.4	11	6.4	7.78	463
May.....	471	22	11	15.2	934
June.....	332	12	10	11.1	659
July.....	292.9	26	7.3	9.45	581
August.....	253.5	7.7	7.3	7.53	463
September.....	206.3	7.5	6.5	6.88	409
Water year 1940-41.....	2,819.2	26	5.2	7.72	5,590

## North Side Minidoka canal near Minidoka, Idaho

Location.- Water-stage recorder, lat. 42°40', long. 113°29', in sec. 1, T. 9 S., R. 25 E., 600 feet downstream from head gates at Minidoka Dam and 6 miles south of Minidoka.

Records available.- May 1909 to September 1941.

Extremes.- Maximum discharge during year, 1,610 second-feet July 10-14, 23; maximum gage height, 9.65 feet July 13; no flow during winter.  
1909-41: Maximum discharge, 1,680 second-feet July 14, 21-31, Aug. 1, 1938; maximum gage height, 9.90 feet July 11, 1932; no flow during winters.

Remarks.- Records excellent. Flow controlled by head gates. Water used for irrigation of 62,000 acres of land under North Side Minidoka project.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	323	292					0	1,120	1,220	1,480	1,340	1,230
2	323	0					0	1,220	1,250	1,510	1,290	1,230
3	322	0					0	1,300	1,290	1,530	1,210	1,160
4	326	0					0	1,340	1,290	1,530	1,250	1,050
5	325	0					0	1,340	1,290	1,530	1,230	939
6	331	0					0	1,390	1,290	1,560	1,320	917
7	330	0					0	1,440	1,130	1,580	1,340	932
8	330	0					0	1,440	987	1,580	1,400	932
9	326	0					0	1,440	917	1,580	1,440	930
10	326	0					0	1,430	928	1,610	1,440	926
11	330	0					0	1,440	830	1,610	1,340	879
12	339	0					0	1,500	937	1,610	1,230	835
13	338	0					0	1,560	1,110	1,610	1,200	774
14	341	0					0	1,570	1,160	1,610	1,140	730
15	341	0					88	1,580	1,150	1,600	1,080	730
16	341	0					142	1,590	1,180	1,600	1,040	726
17	341	0					143	1,570	1,250	1,600	1,040	720
18	341	0					144	1,560	1,340	1,600	1,100	716
19	342	0					205	1,560	1,320	1,600	1,220	764
20	368	0					241	1,560	1,250	1,600	1,400	797
21	385	0					304	1,560	1,200	1,800	1,440	776
22	395	0					417	1,550	1,200	1,800	1,440	768
23	425	0					462	1,550	1,290	1,810	1,410	694
24	427	0					565	1,560	1,420	1,600	1,370	580
25	427	0					670	1,550	1,450	1,540	1,360	578
26	434	0					670	1,540	1,470	1,490	1,360	536
27	425	0					666	1,550	1,550	1,440	1,320	432
28	427	0					728	1,530	1,560	1,390	1,320	434
29	429	0					862	1,480	1,480	1,340	1,280	421
30	425	0					1,150	1,430	1,490	1,310	1,290	423
31	427	-					-	1,300	-	1,340	1,230	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						11,310	434	322	365	22,430		
November.....						292	292	0	9.7	579		
December.....						0	0	0	0	0		
Calendar year 1940.....						222,890	1,660	0	609	442,100		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						0	0	0	0	0		
April.....						7,460	1,150	0	249	14,800		
May.....						45,540	1,580	1,120	1,469	80,330		
June.....						37,139	1,560	928	1,238	70,680		
July.....						47,790	1,610	1,310	1,542	94,790		
August.....						38,960	1,440	1,040	1,289	79,260		
September.....						23,559	1,230	421	785	46,730		
Water year 1940-41.....						213,050	1,610	0	584	422,600		

## South Side Minidoka canal near Minidoka, Idaho

Location.— Water-stage recorder, lat. 42°40', long. 113°29', in sec. 12, T. 9 S., R. 25 E., 300 yards downstream from head gates at Minidoka Dam and 6 miles south of Minidoka.

Records available.— April 1909 to September 1941.

Extremes.— Maximum discharge during year, 1,300 second-feet Aug. 26; maximum gage height, 5.92 feet July 16; no flow during winter.

1909-41: Maximum discharge, 1,350 second-feet July 19, 20, 23-25, 1936, July 9-11, 1940; no flow during winters.

Remarks.— Records excellent. Flow controlled by head gates. Water diverted from Snake River at Minidoka Dam for irrigation of 54,000 acres of land under South Side Minidoka project.

Cooperation.— Gage-height record and results of 4 discharge measurements furnished by Bureau of Reclamation.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	171	164					0	295	860	995	1,110	1,270
2	181	165					0	388	904	1,020	1,100	1,240
3	175	161					0	497	857	1,100	1,090	1,190
4	174	160					0	565	875	1,130	1,090	1,130
5	167	161					0	600	863	1,130	1,090	1,100
6	180	163					0	600	872	1,130	1,160	1,060
7	178	167					0	652	697	1,190	1,160	1,030
8	178	168					0	741	412	1,290	1,200	1,030
9	175	60					0	826	397	1,290	1,220	989
10	177	0					0	872	412	1,290	1,160	937
11	157	0					0	923	412	1,290	1,050	931
12	158	0					0	1,070	467	1,290	952	967
13	163	0					0	1,250	625	1,290	815	895
14	193	0					0	1,280	728	1,290	779	881
15	212	0					0	1,280	755	1,290	790	671
16	237	0					0	1,290	804	1,290	837	648
17	253	0					0	1,290	886	1,290	860	610
18	255	0					0	1,270	998	1,290	958	620
19	257	0					0	1,240	1,040	1,280	1,110	663
20	257	0					0	1,220	1,040	1,240	1,210	618
21	257	0					0	1,220	989	1,250	1,290	586
22	258	0					117	1,250	992	1,240	1,290	526
23	257	0					269	1,250	1,050	1,240	1,290	376
24	257	0					317	1,250	1,130	1,260	1,290	275
25	257	0					319	1,240	1,170	1,270	1,290	301
26	266	0					530	1,220	1,150	1,270	1,300	261
27	263	0					324	1,180	1,200	1,180	1,280	245
28	255	0					304	1,150	1,200	1,130	1,280	241
29	260	0					295	1,110	1,010	1,110	1,290	220
30	193	0					295	1,010	1,010	1,110	1,280	255
31	165	-					-	961	-	1,110	1,280	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						6,576	266	157	212	13,040		
November.....						1,367	168	0	45.6	2,710		
December.....						0	0	0	0	0		
Calendar year 1940.....						167,391	1,350	0	457	332,000		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						0	0	0	0	0		
April.....						2,768	530	0	92.3	5,490		
May.....						30,985	1,290	295	1,000	61,460		
June.....						25,785	1,200	397	960	51,140		
July.....						37,575	1,290	995	1,212	74,530		
August.....						34,901	1,300	779	1,126	69,230		
September.....						21,564	1,270	220	719	42,770		
Water year 1940-41.....						161,521	1,300	0	441	320,400		



Goose Creek above Trapper Creek, near Oakley, Idaho

**Location.**- Water-stage recorder, lat. 42°07', long. 113°56', in sec. 13, T. 15 S., R. 21 E., 5 miles upstream from Trapper Creek and 10 miles south of Oakley.

**Records available.**- April 1911 to September 1916, March 1919 to September 1941.

**Average discharge.**- 18 years (1911-14, 1926-41), 37.7 second-feet.

**Extremes.**- Maximum discharge during year, 100 second-feet May 7 (gage height, 2.69 feet); minimum discharge recorded, 2.6 second-feet Nov. 16 (gage height, 1.33 feet).

1911-16, 1919-41: Maximum discharge, 744 second-feet Mar. 18, 1939, from rating curve extended above 250 second-feet by logarithmic plotting; maximum gage height, 5.6 feet Feb. 21, 1927 (ice effect); no flow July 22 to Aug. 10, Aug. 22-30, 1934, Aug. 15 to Oct. 3, 1935, July 22 to Sept. 25, 1940.

**Remarks.**- Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation. Flow of artesian well, completed in 1935, enters below. Practically entire flow passing station is stored in Oakley Reservoir.

**Cooperation.**- Gage-height record furnished by Oakley Canal Co.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 31 Jan. 1 to Sept. 30

1.4	3.8	1.4	5.0	2.2	48
1.6	8.8	1.6	10	2.4	68
1.8	17	1.8	19	2.6	90
		2.0	32	2.8	113

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.6	10	15			36	51	76	45	21	10	9.3
2	7.1	10	15			40	55	72	42	26	10	8.7
3	7.4	11	15			39	61	77	42	23	9.6	8.4
4	7.1	11	15			39	63	83	44	20	8.7	8.7
5	7.1	12	16			37	61	88	52	17	7.5	9.0
6	7.1	11	16		a24	35	60	95	48	14	7.2	8.7
7	7.1	11	16			34	57	95	52	13	7.2	8.7
8	6.6	13	16			32	53	88	62	12	7.8	9.0
9	6.3	12	14			31	50	86	63	11	9.0	9.0
10	6.0	11	a18			31	52	83	55	9.3	25	9.0
11	6.3	11		31	58	85	50	8.1	14	8.7		
12	6.0	11		29	63	83	45	7.8	14	8.4		
13	6.0	b9		29	66	76	42	10	18	8.1		
14	5.8	b10		29	73	78	35	11	16	8.1		
15	5.3	b11	a14	28	71	81	31	10	14	8.1		
16	5.6	13		28	66	83	17	9.3	13	8.4		
17	5.8	14		29	66	78	18	8.7	14	8.4		
18	6.3	14		30	66	72	19	7.8	19	8.1		
19	a6.0	15		31	68	70	18	7.8	43	9.0		
20	5.8	15	a15	34	36	65	66	15	7.8	21	9.6	
21	6.6	14		35	40	59	57	12	8.1	17	9.9	
22	5.8	11		36	39	55	49	9.9	7.5	16	10	
23	6.0	a9		38	40	52	37	9.9	7.0	14	12	
24	6.3	a13		40	43	55	32	15	7.8	13	15	
25	7.1	a15	42	43	62	34	19	9.0	12	17		
26	7.4	a16	39	43	66	50	19	16	11	15		
27	8.5	a17	35	42	66	51	19	28	10	14		
28	9.2	17	35	41	67	57	18	17	10	14		
29	9.2	15	-	43	71	57	18	14	9.9	13		
30	9.9	15	-	47	75	47	18	12	9.9	13		
31	10	-	-	-	48	-	41	-	11	9.6	-	
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					213.3	10	5.3	5.88	423			
November.....					378	17	9	12.6	750			
December.....					446	-	-	14.4	885			
Calendar year 1940.....					6,939.3	79	0	19.0	13,770			
January.....					558	-	-	18.0	1,110			
February.....					801	42	-	28.6	1,590			
March.....					1,123	48	28	36.2	2,230			
April.....					1,853	75	50	61.8	3,680			
May.....					2,126	95	32	68.6	4,280			
June.....					953.8	63	9.9	31.8	1,890			
July.....					382.0	28	7.0	12.6	778			
August.....					420.4	43	7.2	13.6	834			
September.....					306.3	17	8.1	10.2	608			
Water year 1940-41.....					9,570.8	95	5.3	26.2	19,000			

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of two discharge measurements, weather records, records for nearby stations and Oakley Reservoir.

b Stage-discharge relation affected by ice.

## Oakley Reservoir near Oakley, Idaho

Location.- Staff gage, lat.  $42^{\circ}12'$ , long.  $113^{\circ}55'$ , in sec. 19, T. 14 S., R. 22 E., just upstream from right abutment of dam on Goose Creek, 4 miles southwest of Oakley.

Records available.- October 1912 to September 1941.

Extremes.- Maximum contents observed, 14,000 acre-feet Apr. 30 (gage height, 59.8 feet); minimum observed, 742 acre-feet Oct. 8 (gage height, 13.72 feet).  
1913-41: Maximum contents observed, 74,600 acre-feet June 15, 1921 (gage height, 136.2 feet); reservoir drained at close of season in 1915, 1919, 1920, 1926, 1933.

Remarks.- Reservoir is formed by earth dam constructed in 1911-13; storage began in 1911. Capacity, 74,350 acre-feet between gage heights 0.0 (bottom of diversion tunnel) and 136.0 feet (crest of spillway). Dead storage negligible. Water is used for irrigation of lands along Goose Creek in Oakley Canal Co. project. Figures given herein represent usable contents. Gage read occasionally and contents shown on days observations were made.

Cooperation.- Gage-height record and capacity table furnished by Oakley Canal Co.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	4,280	-	-	-	-	-	8,660	4,360	-
2	-	-	2,830	-	-	-	10,900	-	10,300	-	-	2,460
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	4,470	-
5	-	-	3,030	-	-	-	11,300	13,900	-	-	-	-
6	-	-	-	-	-	5,590	-	13,900	-	-	-	-
7	-	1,720	-	-	6,290	-	-	13,900	-	5,590	-	-
8	742	-	-	-	-	-	-	-	-	-	-	2,320
9	-	-	-	4,640	6,360	-	11,700	-	10,300	-	-	1,960
10	-	-	-	-	6,360	-	-	-	-	-	3,860	1,760
11	841	-	-	-	-	-	-	-	-	-	-	-
12	-	-	3,350	-	-	9,060	-	13,400	-	-	-	-
13	-	-	-	-	-	-	-	-	-	6,520	-	-
14	-	1,980	-	-	6,760	-	12,400	-	-	-	-	-
15	934	-	-	4,960	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	12,600	-	10,700	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	3,520	1,260
19	-	-	3,680	5,190	7,310	9,630	-	12,100	-	-	-	-
20	1,070	-	-	-	-	-	-	-	-	-	-	-
21	-	2,300	-	-	-	-	-	-	-	5,040	-	-
22	-	-	-	-	-	-	-	11,500	-	-	-	-
23	-	-	-	5,420	-	-	13,500	-	10,200	-	-	-
24	-	2,440	-	-	-	-	-	-	-	-	-	-
25	1,200	-	-	-	-	-	-	-	-	-	3,040	-
26	-	-	3,930	-	-	10,200	-	10,700	-	-	-	1,020
27	-	-	-	-	7,960	-	-	-	-	-	-	-
28	-	2,640	-	-	8,040	-	-	-	-	4,670	-	-
29	-	-	-	-	-	-	-	-	8,950	-	-	-
30	-	2,760	-	5,810	-	-	14,000	-	8,810	4,470	-	-
31	1,410	-	4,220	5,870	-	-	-	10,400	-	-	2,900	-

## Trapper Creek near Oakley, Idaho

Location.— Water-stage recorder, lat.  $42^{\circ}10'$ , long.  $113^{\circ}59'$ , in sec. 34, T. 14 S., R. 21 E., 4 miles upstream from Oakley Dam and 7 miles southwest of Oakley.

Records available.— May 1911 to September 1916; March 1919 to September 1941.

Average discharge.— 17 years (1911-12, 1913-14, 1926-41), 13.0 second-feet.

Extremes.— Maximum discharge during year, 700 second-feet Aug. 17 (gage height, 6.99 feet), from rating curve extended above 50 second-feet by logarithmic plotting; minimum, 2.5 second-feet Jan. 1; minimum gage height, 4.62 feet Nov. 13, 23, Jan. 1.  
1911-16, 1919-41: Maximum discharge recorded, that of Aug. 17, 1941 (a higher flow may have occurred during cloud burst about midnight Aug. 15, 1931); minimum not determined, probably occurred during winter.

Remarks.— Records good. A few small diversions above station; flow of artesian well, completed in 1936, enters above. Practically entire flow passing station is stored in Oakley Reservoir.

Cooperation.— Gage-height record furnished by Oakley Canal Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	9.3	8.9	7.1	8.5	10	12	14	13	10	8.5	8.5
2	9.3	9.3	9.3	6.4	8.5	11	12	15	12	9.8	8.5	8.2
3	9.3	9.8	9.3	6.7	8.5	10	12	15	13	9.3	7.5	8.5
4	9.3	9.3	9.3	9.8	8.5	10	12	15	14	9.3	7.5	8.5
5	8.9	9.3	9.3	10	8.5	10	12	15	14	8.9	7.5	8.2
6	8.5	9.3	9.3	9.8	8.9	10	11	15	12	8.5	7.8	8.2
7	8.5	8.9	9.3	8.9	10	a10	11	15	15	8.9	8.2	8.2
8	8.9	8.9	9.3	8.9	9.8	a10	11	16	15	8.9	7.8	8.5
9	9.3	8.9	9.3	8.9	10	a10	11	16	13	8.9	8.5	8.5
10	8.9	8.9	8.2	9.3	11	a10	12	16	12	8.5	9.3	8.2
11	8.9	9.3	6.4	9.3	18	a10	11	a16	11	8.9	8.9	8.2
12	8.9	8.9	8.2	9.3	12	9.8	11	15	11	8.9	9.3	8.5
13	8.9	f6.5	5.3	9.3	10	9.8	12	16	11	8.5	8.9	8.5
14	8.9	f10	5.6	9.3	9.8	9.8	11	16	11	8.5	8.5	8.5
15	8.9	9.3	7.1	9.3	9.8	9.8	11	16	12	8.9	8.2	8.5
16	8.9	9.3	8.9	9.3	9.8	9.8	11	15	11	8.5	8.5	8.5
17	8.5	9.3	11	9.3	9.8	9.8	11	15	11	8.5	42	8.2
18	8.5	9.8	11	9.3	9.8	9.8	12	14	11	8.2	11	8.2
19	8.5	9.8	10	9.3	9.8	10	12	14	11	8.9	9.8	8.5
20	8.5	9.3	9.3	9.8	9.8	11	11	14	11	8.9	9.8	8.9
21	8.9	9.8	8.9	9.8	10	10	11	14	9.8	8.2	9.3	8.9
22	9.3	9.8	8.9	9.8	10	10	11	13	9.3	7.8	8.9	9.3
23	8.9	7.1	9.3	9.3	10	11	11	13	8.9	8.2	8.9	12
24	9.3	11	9.3	9.8	11	11	12	13	8.9	8.5	8.9	9.8
25	9.3	9.3	8.9	9.8	a11	11	13	14	8.9	8.9	8.9	8.9
26	9.8	9.3	8.9	10	a10	10	12	14	8.9	9.3	8.9	8.5
27	9.8	8.9	9.8	9.3	9.8	11	13	14	9.9	9.3	8.5	8.5
28	9.3	9.3	9.3	9.3	9.8	11	13	14	10	8.5	8.5	8.9
29	9.3	9.3	9.3	9.3	-	11	13	14	11	8.5	8.9	8.9
30	9.8	9.3	9.8	8.5	-	11	14	13	10	8.5	8.5	8.9
31	9.3	-	9.3	8.5	-	11	-	14	-	8.5	8.5	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						280.6	9.8	8.5	9.05	557		
November.....						276.5	11	6.5	9.22	548		
December.....						276.0	11	5.3	8.90	547		
Calendar year 1940.....						3,860.8	20	5.3	10.5	7,660		
January.....						282.7	10	6.4	9.12	561		
February.....						282.4	18	8.5	10.1	560		
March.....						318.6	11	9.8	10.3	632		
April.....						352	14	11	11.7	698		
May.....						453	16	13	14.6	899		
June.....						338.6	15	8.9	11.3	672		
July.....						271.9	10	7.8	8.77	535		
August.....						302.7	42	7.5	9.76	600		
September.....						280.6	12	8.2	8.69	517		
Water year 1940-41.....						3,695.6	42	5.3	10.1	7,330		

a No gage-height record; discharge interpolated.

f Fragmentary gage-height record; discharge computed on basis of available gage-height record and records for nearby streams.

## P. A. lateral near Milner, Idaho

Location.- Staff gage, lat. 42°32', long. 114°01', in sec. 22, T. 10 S., R. 21 E., 600 feet downstream from pumping station and 2½ miles northeast of Milner.

Records available.- April 1919 to September 1941.

Extremes.- Maximum discharge during year, 63 second-feet on days; no flow at times.  
1919-41: Maximum discharge, 64 second-feet May 11-13, 1920, July 11, 12, 19-29, 1932; no flow at times.

Remarks.- Records excellent. Flow regulated by pumping plant, which lifts water from Snake River for irrigation on North Side Twin Falls tract.

Cooperation.- Gage-height record and results of 16 discharge measurements furnished by North Side Canal Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0					0	56	62	62	63	63
2		0					0	56	62	62	63	63
3		0					0	56	62	62	63	63
4		0					0	56	62	62	63	63
5		0					0	56	62	62	63	63
6		0					0	56	62	62	63	63
7		0					0	56	62	62	63	63
8		0					0	58	62	63	63	63
9		0					0	60	62	63	63	63
10		0					0	61	62	63	63	60
11		0					0	62	62	63	63	63
12		0					0	62	62	63	63	63
13		0					0	62	62	63	63	63
14		0					0	62	62	63	63	63
15		0					0	62	62	63	63	63
16		0					0	62	62	63	63	62
17		0					0	62	62	63	63	60
18		11					0	62	62	63	63	60
19		14					0	62	62	63	63	59
20		0					0	62	62	63	63	58
21		0					0	62	62	63	63	55
22		0					0	62	62	63	63	55
23		0					0	62	62	63	63	55
24		0					0	62	62	63	63	55
25		0					10	62	62	62	63	14
26		0					24	62	62	62	63	0
27		0					29	62	62	62	63	0
28		0					40	62	62	59	63	0
29		0					46	62	62	63	63	0
30		0					52	62	62	63	63	0
31		-					-	62	-	63	63	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							0	0	0	0	0	
November.....							25	14	0	0.5	50	
December.....							0	0	0	0	0	
Calendar year 1940.....							5,635	60	0	23.6	17,133	
January.....							0	0	0	0	0	
February.....							0	0	0	0	0	
March.....							0	0	0	0	0	
April.....							201	52	0	6.7	399	
May.....							1,873	62	56	60.4	3,720	
June.....							1,860	62	62	62.0	3,690	
July.....							1,939	63	59	62.5	3,850	
August.....							1,953	63	63	63.0	3,870	
September.....							1,475	63	0	49.2	2,850	
Water year 1940-41.....							9,326	63	0	25.6	18,610	

## Milner low-lift canal near Milner, Idaho

Location.- Water-stage recorder, lat. 42°31', long. 114°01', in sec. 32, T. 10 S., R. 21 E., 800 feet downstream from head of canal and 1½ miles south of Milner.

Records available.- June 1921 to September 1941.

Extremes.- Maximum discharge during year, 171 second-feet May 23, 24, June 2, maximum gage height, 3.08 feet July 5-6; no flow on many days.  
1921-41: Maximum discharge, 174 second-feet July 7, 1936 (gage height, 3.67 feet); no flow on many days.

Remarks.- Records good. Flow controlled by pumping plant, which lifts water from Snake River above Milner Dam for irrigation of 9,000 acres of land in Milner low-lift irrigation district.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	137	170	164	164	164
2							0	138	171	165	164	164
3							0	138	161	163	164	164
4							0	138	162	166	164	164
5							0	154	153	168	164	149
6							0	163	150	168	163	143
7							0	161	78	166	163	146
8							0	162	0	161	163	146
9							0	162	0	166	162	146
10							0	163	0	166	162	146
11							0	161	104	166	162	121
12							0	161	112	166	162	146
13							0	162	131	166	162	147
14							0	162	136	167	162	152
15							0	163	128	163	161	0
16							0	166	138	163	161	0
17							0	140	149	163	161	0
18							0	165	149	163	162	0
19							0	164	149	163	161	105
20							0	164	149	163	162	117
21							0	164	140	163	163	118
22							8	169	116	163	163	118
23							24	171	125	165	163	117
24							50	171	145	163	164	7
25							66	169	146	163	164	0
26							81	166	146	164	162	0
27							79	166	146	166	162	0
28							94	168	146	166	164	94
29							109	170	146	166	164	100
30							124	169	145	166	163	81
31							-	170	-	164	165	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							0	0	0	0	0	
November.....							0	0	0	0	0	
December.....							0	0	0	0	0	
Calendar year 1940.....							23,161	173	0	63.3	45,980	
January.....							0	0	0	0	0	
February.....							0	0	0	0	0	
March.....							0	0	0	0	0	
April.....							635	124	0	21.2	1,280	
May.....							4,977	171	137	161	9,870	
June.....							3,765	171	0	128	7,600	
July.....							5,101	168	163	165	10,120	
August.....							5,044	164	161	163	10,000	
September.....							2,955	164	0	98.5	5,860	
Water year 1940-41.....							22,495	171	0	61.6	44,610	

## Gooding canal at Milner, Idaho

Location.- Water-stage recorder on Milner-Gooding canal in SW $\frac{1}{4}$  sec. 7 and differential recorder on control gates of North Side Canal Co. diversions in secs. 18 and 19, T. 10 S., R. 21 E., about 3 miles downstream from headgates that are in sec. 28, T. 10 S., R. 21 E., lat. 42°31', long. 114°01'. The differential recorder replaced staff gages on May 1, 1941.

Records available.- May 1930 to September 1941.

Extremes.- Maximum daily discharge during year, 2,380 second-feet July 12-16, 25-27. No flow on many days.

1939-41: Maximum daily discharge, 2,410 second-feet July 15-21, 1940; no flow on many days.

Remarks.- Records good. Gooding canal diverts water from Snake River for Milner-Gooding project of Bureau of Reclamation and in part for project of North Side Canal Co. The latter project also receives water through the North Side Twin Falls canal and P. A. lateral. Discharge of canal computed by combining the discharge of Milner-Gooding diversion and that of North Side Canal Co. diversions below their division point and adding from 20 to 50 second-feet to that sum for loss between head gates and division point.

Cooperation.- Gage-height record and some discharge measurements furnished by North Side Canal Co. and American Falls Reservoir District No. 2.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	850	570					0	1,480	1,920	2,190	2,320	2,170
2	840	630					0	1,790	1,920	2,180	2,310	2,170
3	850	670					0	1,870	1,920	2,180	2,310	2,170
4	650	710					0	1,870	1,920	2,180	2,300	2,160
5	0	680					0	1,880	1,910	2,180	2,280	2,160
6	0	270					0	1,870	1,910	2,180	2,240	2,160
7	0	0					0	1,870	1,900	2,210	2,190	2,160
8	0	0					0	1,870	1,910	2,230	2,180	2,140
9	0	0					0	1,890	1,870	2,230	2,160	1,990
10	0	0					0	1,890	1,830	2,320	2,160	1,840
11	30	0					0	1,890	1,830	2,370	2,170	1,840
12	130	0					0	1,880	1,820	2,380	2,150	1,850
13	90	0					0	1,840	1,830	2,380	2,150	1,850
14	90	0					0	1,840	1,830	2,380	2,170	1,800
15	100	250					0	1,840	1,840	2,380	2,220	1,770
16	100	510					0	1,830	1,910	2,380	2,210	1,780
17	100	530					0	1,860	1,950	2,370	2,200	1,730
18	100	530					0	1,860	1,950	2,370	2,200	1,700
19	450	530					0	1,870	1,950	2,370	2,190	1,700
20	650	360					370	1,880	1,950	2,370	2,200	1,700
21	610	0					710	1,880	1,970	2,370	2,210	1,700
22	630	0					810	1,880	2,010	2,370	2,210	1,700
23	620	0					970	1,890	2,080	2,360	2,210	1,700
24	650	0					1,080	1,890	2,070	2,370	2,210	1,700
25	650	0					1,090	1,890	2,150	2,380	2,210	1,680
26	670	0					1,160	1,900	2,170	2,380	2,210	1,650
27	670	0					1,200	1,910	2,170	2,380	2,190	1,640
28	670	0					1,160	1,920	2,190	2,370	2,170	1,640
29	650	0					1,120	1,910	2,190	2,360	2,170	970
30	610	0					1,120	1,910	2,190	2,340	2,170	770
31	580	-					-	1,910	-	2,330	2,170	-

Month	Second-foot-days	Discharge in second-feet			Total run-off in acre-feet	Distribution (acre-feet)	
		Maximum	Minimum	Mean		To Milner-Gooding project	To North Side Canal Co. project
October.....	12,020	850	0	388	23,940	0	23,940
November.....	6,240	710	0	208	12,380	5,380	7,000
December.....	0	0	0	0	0	0	0
Calendar year 1940	338,245	2,410	0	924	670,880	407,650	263,230
January.....	0	0	0	0	0	0	0
February.....	0	0	0	0	0	0	0
March.....	0	0	0	0	0	0	0
April.....	10,790	1,200	0	360	21,400	21,400	0
May.....	57,760	1,920	1,480	1,863	114,560	71,300	43,260
June.....	59,060	2,190	1,820	1,969	117,140	75,190	41,950
July.....	71,840	2,380	2,180	2,317	142,490	95,540	46,950
August.....	68,450	2,320	2,150	2,208	135,770	88,360	47,410
September.....	53,990	2,170	770	1,800	107,090	62,640	44,450
Water year 1940-41	340,150	2,380	0	932	674,370	419,810	254,560

## North Side Twin Falls canal at Milner, Idaho

Location.—Water-stage recorder,\* lat. 42°32', long. 114°01', in sec. 20, T. 10 S., R. 21 E., half a mile north of Milner and three-quarters of a mile downstream from head gates at Milner Dam.

Records available.—May 1909 to September 1941.

Extremes.—Maximum discharge during year, 2,640 second-feet July 26, 27, Aug. 10 (gauge height, 8.11 feet); no flow on several days.  
1909-41: Maximum daily discharge, 3,200 second-feet July 5-7, 29-31, 1921, May 15, 1928, June 2, July 23, 1929; no flow at times when head gates were closed.

Remarks.—Records excellent April to September, good October to March. Flow controlled by operation of head gates. Water diverted by this canal and by P. A. lateral and part of that diverted by Gooding canal, all at Milner, is used for irrigation of 163,000 acres of land under the North Side Canal Co. system. Some sub-marginal land was removed from cultivation resulting in a reduction of acreage irrigated.

Cooperation.—Gage-height record and results of 28 discharge measurements furnished by North Side Canal Co.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	494	451	421	433	10	2,260	2,330	2,190	2,560	1,730
2	0	0	494	451	424	433	0	2,270	2,330	2,190	2,570	1,660
3	0	0	487	461	424	433	0	2,380	2,330	2,240	2,570	1,640
4	0	0	490	445	421	436	174	2,430	2,330	2,260	2,570	1,610
5	0	0	490	445	421	430	525	2,470	2,330	2,300	2,570	1,580
6	0	349	497	430	421	439	595	2,500	2,320	2,340	2,590	1,500
7	0	579	506	424	421	439	700	2,260	2,160	2,430	2,610	1,530
8	0	575	503	424	424	435	765	2,200	2,050	2,520	2,630	1,530
9	0	566	497	427	424	433	824	2,250	1,970	2,530	2,630	1,500
10	0	569	500	427	430	433	850	2,250	1,970	2,540	2,640	1,480
11	0	575	503	427	433	442	897	2,250	1,960	2,550	2,630	1,470
12	459	582	506	412	421	448	926	2,290	2,050	2,580	2,610	1,490
13	676	579	506	409	427	448	900	2,290	2,070	2,580	2,680	1,500
14	627	575	506	400	427	445	919	2,500	2,100	2,580	2,470	1,460
15	598	569	494	394	430	442	952	2,500	2,090	2,550	2,220	1,400
16	588	559	497	397	430	448	960	2,500	1,940	2,580	2,190	1,370
17	579	547	490	397	433	436	1,070	2,290	1,890	2,560	2,160	1,150
18	579	537	484	397	430	433	1,240	2,310	1,890	2,590	2,120	433
19	217	543	469	397	433	436	1,250	2,310	1,990	2,620	2,110	367
20	0	547	463	397	433	436	1,300	2,300	2,120	2,620	2,110	352
21	0	543	463	397	436	439	1,440	2,150	2,050	2,620	2,110	421
22	10	550	460	397	439	439	1,630	2,100	2,100	2,620	2,110	569
23	0	531	457	397	439	436	1,840	2,100	2,040	2,630	2,120	641
24	0	512	457	397	436	433	1,840	2,100	2,120	2,630	2,130	418
25	0	494	454	409	442	412	1,820	2,100	2,140	2,630	2,100	352
26	0	497	454	415	439	403	1,860	2,100	2,180	2,640	2,070	358
27	0	500	445	421	436	400	1,880	2,100	2,210	2,640	2,070	516
28	0	497	454	421	436	400	1,940	2,250	2,250	2,620	2,060	608
29	0	497	457	421	-	406	2,110	2,330	2,240	2,610	2,050	604
30	0	494	454	421	-	135	2,270	2,330	2,210	2,580	2,050	438
31	0	-	451	421	-	0	-	2,340	-	2,560	1,950	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,332	675	0	140	8,590		
November.....						13,366	582	0	446	26,510		
December.....						14,882	506	445	480	29,520		
Calendar year 1940.....						414,724	2,620	0	1,133	822,700		
January.....						12,919	451	394	417	25,620		
February.....						12,031	442	421	430	23,660		
March.....						12,662	448	0	408	25,110		
April.....						33,507	2,270	0	1,117	66,460		
May.....						70,240	2,500	2,100	2,266	139,300		
June.....						63,760	2,330	1,890	2,125	126,500		
July.....						78,180	2,640	2,190	2,522	155,100		
August.....						71,960	2,640	1,950	2,321	142,700		
September.....						31,677	1,730	352	1,056	62,830		
Water year 1940-41.....						419,516	2,640	0	1,149	832,100		

## South Side Twin Falls canal at Milner, Idaho

Location.— Water-stage recorder, lat. 42°31', long. 114°01', in sec. 29, T. 10 S., R. 21 E., and 700 feet downstream from head gates at Milner.

Records available.— May 1909 to September 1941.

Extremes.— Maximum discharge during year, 3,610 second-feet July 23 (gage height, 10.45 feet); minimum, 35 second-feet Nov. 1-5.

1909-41: Maximum daily discharge, 4,600 second-feet Aug. 12, 1918, computed on basis of stage-discharge relation for canal plus estimates by hydrographer of water wasted through spillway below station and returned to river; no flow Sept. 20, 1920.

Remarks.— Records excellent except those for period when gates were closed, which are fair. Flow controlled by head gates. South Side Twin Falls canal diverts water from Snake River at Milner Dam for irrigation of 202,000 acres of land in Twin Falls County.

Cooperation.— Gage-height record furnished by Twin Falls Canal Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,070	a35	625	586	577	532	886	3,220	3,070	3,140	3,440	3,400
2	1,030	a35	625	592	577	532	1,130	3,280	3,040	3,150	3,420	3,340
3	996	a35	631	592	577	532	1,250	3,160	3,000	3,170	3,400	3,220
4	937	a35	628	592	577	529	1,260	3,130	2,980	3,170	3,420	3,200
5	886	a35	628	595	577	532	1,260	3,090	2,970	3,180	3,440	3,160
6	858	233	613	595	577	535	1,270	3,060	2,970	3,200	3,470	3,040
7	752	612	607	595	583	506	1,260	3,120	2,760	3,220	3,500	2,990
8	681	825	610	589	586	501	1,260	3,140	2,680	3,250	3,500	2,920
9	688	822	598	589	577	501	1,360	3,130	2,670	3,360	3,510	2,840
10	613	822	592	586	568	467	1,430	3,120	2,630	3,410	3,510	2,690
11	580	822	592	577	568	460	1,440	3,140	2,560	3,400	3,500	2,570
12	577	822	592	580	571	460	1,440	3,150	2,560	3,410	3,500	2,530
13	583	822	598	577	569	464	1,440	3,150	2,560	3,420	3,500	2,430
14	595	819	598	580	569	454	1,440	3,150	2,600	3,430	3,500	2,390
15	613	691	595	580	547	457	1,440	3,160	2,630	3,460	3,490	2,380
16	619	619	595	574	541	457	1,440	3,170	2,720	3,470	3,490	2,220
17	622	622	595	568	538	454	1,440	3,150	2,800	3,470	3,490	2,120
18	619	622	595	568	541	457	1,440	3,160	2,920	3,480	3,490	2,090
19	616	622	598	571	541	457	1,380	3,150	3,010	3,490	3,490	2,090
20	619	625	598	571	541	454	1,400	3,160	3,090	3,490	3,500	2,030
21	622	634	595	565	544	452	1,460	3,150	3,090	3,530	3,500	1,990
22	628	628	598	568	544	452	1,900	3,180	3,080	3,560	3,500	1,870
23	649	628	592	571	541	379	2,210	3,160	3,080	3,590	3,500	1,750
24	649	628	589	571	544	152	2,520	3,150	3,150	3,570	3,500	1,670
25	649	625	592	571	544	152	2,550	3,160	3,160	3,560	3,500	1,590
26	649	625	595	571	532	158	2,620	3,180	3,170	3,500	3,500	1,510
27	659	625	595	571	532	247	2,640	3,180	3,180	3,470	3,500	1,400
28	649	625	595	571	532	481	2,640	3,180	3,180	3,460	3,490	1,360
29	637	625	592	574	-	622	2,780	3,180	3,180	3,440	3,490	1,350
30	625	628	595	574	-	771	2,970	3,130	3,160	3,450	3,450	1,270
31	463	-	595	574	-	822	-	3,100	-	3,430	3,420	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						21,453	1,070	483	692	42,550		
November.....						16,846	825	35	562	33,410		
December.....						18,646	631	589	601	36,980		
Calendar year 1940.....						623,991	3,630	35	1,706	1,238,000		
January.....						17,938	595	565	579	35,580		
February.....						15,595	586	532	567	30,930		
March.....						14,419	822	162	465	26,600		
April.....						50,956	2,970	886	1,699	101,100		
May.....						97,710	3,280	3,060	3,152	193,800		
June.....						87,630	3,180	2,560	2,921	173,800		
July.....						105,310	3,590	3,140	3,397	208,600		
August.....						107,890	3,510	3,400	3,480	214,000		
September.....						69,390	3,400	1,270	2,313	137,600		
Water year 1940-41.....						623,763	3,590	35	1,709	1,237,000		

a Gates closed; leakage estimated by observer.



## Rock Creek near Twin Falls, Idaho

Location.- Water-stage recorder, lat.  $42^{\circ}36'$ , long.  $114^{\circ}32'$ , in SW $\frac{1}{4}$  sec. 36, T. 9 S., R. 16 E., at highway bridge, 3 miles upstream from mouth and 4 miles northwest of town of Twin Falls.

Records available.- March 1922 to September 1941.

Average discharge.- 19 years, 210 second-feet.

Extremes.- Maximum discharge during year, 363 second-feet June 7 (gage height, 2.88 feet); minimum, 90 second-feet Mar. 28 (gage height, 1.66 feet).  
1922-41: Maximum discharge, 984 second-feet Sept. 21, 1927 (gage height, 4.5 feet, datum then in use, from floodmarks); minimum, that of Mar. 28, 1941.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Practically all normal summer flow diverted several miles above station for irrigation. Waste water from South Side Twin Falls low-line canal, which crosses Rock Creek 12 miles above station, causes abrupt fluctuations in stage at times. Irrigation waste water and return flow from project lands enter above gage.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	198	192	131	117	115	122	177	226	212	243	262
2	238	200	175	127	117	114	134	179	221	207	243	276
3	233	200	170	136	117	112	143	177	218	207	240	279
4	221	185	170	223	a118	113	153	179	216	209	233	270
5	221	188	171	181	a119	112	162	183	209	207	236	270
6	a220	182	168	168	a119	106	150	179	270	198	236	270
7	218	160	166	153	a120	102	146	181	338	202	233	270
8	221	155	166	138	a121	101	150	187	348	a200	233	273
9	223	170	164	132	a122	101	153	185	298	198	238	279
10	216	185	160	131	a122	104	162	181	262	198	233	285
11	209	a188	155	131	a123	102	152	181	246	196	233	282
12	209	a190	a149	130	124	101	150	151	233	194	248	285
13	205	a193	a142	128	120	103	148	173	230	194	248	282
14	202	a196	a136	132	121	102	150	173	226	198	243	282
15	207	198	236	150	120	101	158	175	228	198	240	282
16	212	198	223	148	118	98	157	166	228	202	240	282
17	212	198	246	145	117	99	155	173	223	200	243	282
18	212	198	171	127	118	99	163	181	228	202	246	279
19	212	187	145	a130	118	100	148	185	228	212	243	270
20	212	187	142	a134	116	107	152	173	223	214	246	276
21	212	187	143	137	114	109	153	170	218	212	238	273
22	207	185	145	131	114	108	146	170	212	221	243	273
23	200	173	148	127	118	108	153	170	205	228	240	285
24	202	173	150	127	117	107	164	175	196	236	240	279
25	205	183	150	127	113	99	202	185	200	233	246	270
26	209	179	148	130	112	94	175	200	209	233	246	273
27	209	181	155	122	112	92	179	207	207	243	248	268
28	202	185	148	121	114	92	177	209	209	254	248	265
29	202	187	152	118	-	110	177	212	221	240	251	270
30	202	194	157	118	-	109	177	218	212	233	251	266
31	198	-	145	117	-	114	-	a222	-	240	259	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				6,591	240	198	213	13,070				
November.....				5,542	200	155	185	10,990				
December.....				5,086	246	136	164	10,090				
Calendar year 1940.....				65,699	298	95	180	130,300				
January.....				4,250	223	117	137	8,430				
February.....				3,300	124	112	113	6,550				
March.....				3,234	115	92	104	6,410				
April.....				4,691	202	122	156	9,300				
May.....				5,707	222	166	184	11,320				
June.....				6,986	348	196	233	13,860				
July.....				6,621	264	194	214	13,130				
August.....				7,508	289	233	242	14,890				
September.....				8,257	285	262	275	16,380				
Water year 1940-41.....				67,773	348	92	186	134,400				

a No gage-height record; discharge interpolated.

b Computed from staff-gage reading.

## SALMON FALLS CREEK BASIN

Salmon Falls Creek near San Jacinto, Nev.

Location.- Water-stage recorder, lat. 41°57', long. 114°42', in sec. 23, T. 47 N., R. 64 E., in canyon 200 yards downstream from highway bridge, 250 yards downstream from Shoshone Creek, and 5 miles north of San Jacinto.

Records available.- September 1909 to September 1916, October 1918 to September 1941.

Average discharge.- 27 years (1910-16, 1919-20, 1921-41), 118 second-feet.

Extremes.- Maximum discharge during year, 316 second-feet June 8 (gage height, 4.20 feet); minimum recorded, 13 second-feet Aug. 9 (gage height, 2.34 feet).  
1909-16, 1918-41: Maximum discharge, 1,760 second-feet Mar. 18, 1939 (gage height, 9.23 feet); minimum, 5.3 second-feet Aug. 17, 1940 (gage height, 2.16 feet).

Remarks.- Records good except those for December 3-12, March 14-28, which are fair, and those for July 16-29, which are poor. Many diversions above station for irrigation. Salmon Dam of Salmon River Canal Co., Ltd., 15 miles below station, forms a reservoir having a capacity of about 180,000 acre-feet.

Cooperation.- Gage-height record furnished by Salmon River Canal Co., Ltd.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	38	41	37	57	71	153	230	204	66	16	36
2	25	38	39	42	61	86	155	243	191	65	15	35
3	29	39	a40	42	58	80	161	258	182	65	15	36
4	28	43	a40	44	56	77	165	270	170	66	14	36
5	25	45	a40	47	55	78	163	267	170	65	14	36
6	24	48	a40	48	54	78	161	260	184	60	14	36
7	22	46	a40	48	65	77	151	239	286	60	14	35
8	22	45	a40	48	54	72	145	227	304	56	15	34
9	21	45	a40	48	53	72	141	230	308	54	14	33
10	21	44	a40	46	55	75	147	230	301	51	14	32
11	21	44	a35	45	65	75	165	227	260	48	18	30
12	22	44	a30	48	65	74	172	225	220	42	22	29
13	23	39	42	48	61	72	172	227	191	37	23	26
14	22	39	40	53	60	a70	172	260	167	36	28	26
15	22	44	40	50	57	a68	170	296	151	30	28	25
16	23	45	43	53	57	a68	174	301	149	a20	26	26
17	23	42	44	50	57	a72	174	274	141		28	24
18	24	44	46	61	57	a78	176	259	131		35	24
19	24	43	47	58	58	a86	170	220	124		34	23
20	24	41	48	58	57	a100	159	220	116		32	23
21	24	41	50	61	57	a110	151	216	103	a20	31	23
22	26	34	50	65	60	a110	143	193	92		36	23
23	27	30	52	65	63	a110	139	174	81		37	32
24	28	40	52	66	69	a125	141	163	74		35	34
25	28	41	50	67	70	a130	151	170	70		40	33
26	29	32	51	69	67	a130	170	211	65	15 15	42	32
27	30	41	52	69	65	a130	178	253	61		40	29
28	30	41	44	61	65	a120	182	272	58		39	28
29	33	41	55	56	-	130	193	255	62		40	28
30	37	41	55	56	-	139	211	232	65		38	28
31	36	-	47	60	-	147	-	216	-	15	36	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						799	37	21	25.8	1,580		
November.....						1,238	48	30	41.3	2,460		
December.....						1,373	55	30	44.3	2,720		
Calendar year 1940.....						28,022.5	334	6.5	76.6	55,590		
January.....						1,669	69	37	53.8	3,310		
February.....						1,675	70	55	59.9	3,350		
March.....						2,910	147	68	93.9	5,770		
April.....						4,905	211	139	164	9,730		
May.....						7,301	301	163	256	14,480		
June.....						4,680	308	58	156	9,280		
July.....						1,111	66	-	35.8	2,200		
August.....						841	42	14	27.1	1,670		
September.....						595	36	25	29.8	1,780		
Water year 1940-41.....						29,400	308	14	80.5	56,310		

a No gage-height record; discharge computed on basis of weather records and records for stations on nearby streams.

## Salmon River Canal Co. Reservoir near Rogerson, Idaho

Location.- Staff gage at dam on Salmon Falls Creek, lat. 42°13', long. 114°44', in sec. 17, T. 14 S., R. 15 E., 10 miles west of Rogerson. Datum of gage is 4,990.0 feet above mean sea level (surveys of Salmon River Canal Co.).

Records available.- January 1922 to September 1941.

Extremes.- Maximum contents observed during year, 28,640 acre-feet June 18 (gage height, 19.20 feet); minimum observed, 500 acre-feet Oct. 1-10 (gage height, 0.40 foot). 1922-41: Maximum contents observed, 123,700 acre-feet May 30, 31, 1922 (gage height, 61.1 feet); minimum observed, 125 acre-feet Sept. 21 to Oct. 5, 1934 (gage height, 0.1 foot).

Remarks.- Reservoir is formed by gravity-section concrete-arch dam completed in 1911; storage began in 1910. Capacity, 182,650 acre-feet between gage heights 0.0 foot (bottom of outlet tunnel) and 50.0 feet (maximum operating level). Dead storage unknown. Water is used for irrigation of lands in Salmon River Canal Co. project. Figures given herein represent usable contents. Gage read once daily.

Cooperation.- Gage-height record and capacity table furnished by Salmon River Canal Co. Ltd.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	500	1,125	2,655	3,580	5,975	8,445	12,500	19,900	23,030	23,120	10,990	4,120
2	500	1,125	2,770	3,580	5,942	8,590	12,780	20,390	23,200	23,200	10,400	4,120
3	500	1,125	2,835	3,580	6,010	8,735	13,080	20,790	23,460	23,200	9,822	4,120
4	500	1,125	2,905	3,580	6,078	8,808	13,360	21,180	23,800	23,280	9,008	4,120
5	500	1,125	2,770	3,715	6,078	8,880	13,510	21,670	24,140	23,370	8,372	4,120
6	500	1,125	2,770	3,850	6,145	9,025	13,900	22,180	24,300	22,520	7,648	4,120
7	500	1,188	2,655	3,850	6,212	9,170	14,100	22,520	24,730	21,670	7,358	4,120
8	500	1,250	2,500	3,985	6,280	9,242	13,950	22,940	25,160	20,960	7,358	4,120
9	500	1,312	2,438	4,120	6,415	9,315	13,950	23,370	25,580	19,900	7,430	4,120
10	500	1,375	2,375	4,120	6,482	9,460	14,250	23,800	26,190	18,940	7,430	4,120
11	625	1,438	2,250	4,255	6,550	9,605	14,550	24,220	26,600	18,000	6,822	4,120
12	625	1,500	2,188	4,322	6,695	9,678	14,700	24,640	27,110	17,250	6,010	4,120
13	625	1,562	2,250	4,390	6,840	9,750	15,000	24,900	27,450	16,350	5,535	4,120
14	625	1,625	2,250	4,458	6,913	9,895	15,380	25,240	27,790	15,980	5,200	4,120
15	625	1,688	2,250	4,592	6,995	10,040	15,680	25,580	27,960	15,980	4,930	4,120
16	750	1,750	2,312	4,660	7,140	10,110	15,980	25,920	26,300	15,980	4,660	4,120
17	750	1,812	2,375	4,795	7,212	10,180	16,200	26,260	26,380	15,980	4,525	4,188
18	750	1,875	2,438	4,795	7,285	10,260	16,580	26,430	26,640	15,980	4,322	4,120
19	750	1,938	2,500	4,862	7,430	10,330	16,800	26,430	27,960	15,150	4,120	4,120
20	750	2,000	2,568	4,930	7,502	10,480	17,100	26,600	27,280	14,400	3,918	4,120
21	750	2,062	2,655	5,065	7,575	10,620	17,320	26,090	26,430	13,730	3,850	4,120
22	750	2,062	2,702	5,132	7,720	10,760	17,550	25,750	25,580	13,000	3,850	4,120
23	750	2,062	2,770	5,200	7,792	10,910	17,780	25,240	24,640	12,280	3,918	4,120
24	750	2,125	2,838	5,268	7,865	11,060	18,000	24,730	23,540	11,640	3,918	4,120
25	875	2,188	2,905	5,335	8,010	11,200	18,300	24,140	22,780	11,200	3,985	4,255
26	875	2,250	2,972	5,470	8,155	11,340	18,540	23,370	22,690	11,200	4,052	4,255
27	875	2,312	3,108	5,538	8,300	11,490	18,560	22,690	22,690	11,200	4,052	4,255
28	875	2,375	3,242	5,605	8,372	11,710	19,100	22,180	22,780	11,200	4,052	4,255
29	875	2,500	3,310	5,672	-	11,850	19,340	22,100	22,960	11,130	4,120	4,255
30	875	2,568	3,445	5,740	-	12,070	19,660	22,350	23,030	11,130	4,120	4,255
31	875	-	3,580	5,808	-	12,280	-	22,690	-	11,060	4,120	-

Monthly gage height and contents, water year October 1940 to September 1941

Dats	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	0.30	375	-
Oct. 31.....	.70	875	+500
Nov. 30.....	2.05	2,568	+1,693
Dec. 31.....	2.80	3,590	+1,012
Calendar year 1940.....	-	-	-3,560
Jan. 31.....	4.45	5,808	+2,228
Feb. 28.....	6.25	8,372	+2,564
Mar. 31.....	8.95	12,290	+3,908
Apr. 30.....	13.85	19,660	+7,380
May 31.....	15.70	22,690	+3,030
June 30.....	15.90	23,030	+340
July 31.....	8.10	11,060	-11,970
Aug. 31.....	3.20	4,120	-6,940
Sept. 30.....	3.30	4,255	+135
Water year 1940-41.....	-	-	+3,850

## SALMON FALLS CREEK BASIN

Salmon River Canal Co. canal near Rogerson, Idaho

Location.- Water-stage recorder, lat. 42°15', long. 114°45', in sec. 7, T. 14 S., R. 15 E., half a mile downstream from Salmon River Canal Co. Reservoir and 7 miles west of Rogerson.

Records available.- April 1937 to September 1941.

Extremes.- Maximum discharge during year, 550 second-feet June 22 (gage height, 7.08 feet); no flow during long periods.  
1937-40: Maximum discharge, 577 second-feet July 17, 1938 (gage height, 7.34 feet); no flow during long periods in each year.

Remarks.- Records good. Canal diverts from Salmon River Canal Co. Reservoir for irrigation of lands in Salmon River Canal Co. project.

Cooperation.- Gage-height record furnished by Salmon River Canal Co., Ltd.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0				0	0	77	0	219	
2			0				0	0	54	0	276	
3			0				0	0	0	0	294	
4			18				0	0	0	0	321	
5			90				0	0	0	296	312	
6			88				0	0	0	420	251	
7			85				153	0	0	420	0	
8			83				196	0	0	451	0	
9			77				0	0	0	473	0	
10			70				0	0	0	473	240	
11			65				0	0	0	462	285	
12			12				0	0	0	450	255	
13			0				0	0	0	328	216	
14			0				0	0	0	0	105	
15			0					81	0	0	99	
16			0				0	89	0	0	99	
17			0				0	102	0	0	99	
18			0				0	102	295	270	29	
19			0				0	102	420	340	99	
20			0				0	314	462	340	65	
21			0				0	380	506	360	0	
22			0				0	390	517	350	0	
23			0				0	390	359	330	0	
24			0				0	410	493	251	0	
25			0				0	484	150	0	0	
26			0				0	495	0	0	0	
27			0				0	473	0	0	0	
28			0				0	352	0	0	0	
29			0				0	96	0	0	0	
30			0				0	83	0	0	0	
31			0				-	81	-	0	0	
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						0	0	0	0	0		
December.....						588	90	0	19.0	1,170		
Calendar year 1940.....						20,150	539	0	55.1	39,970		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						0	0	0	0	0		
April.....						349	196	0	11.6	692		
May.....						4,424	495	0	143	8,770		
June.....						3,513	539	0	117	6,270		
July.....						5,974	473	0	193	11,860		
August.....						3,317	321	0	107	6,580		
September.....						0	0	0	0	0		
Water year 1940-41.....						18,165	539	0	49.8	36,030		

## Big Wood River at Hailey, Idaho

Location.- Water-stage recorder, lat. 43°31', long. 114°20', in SW<sup>1</sup>/<sub>4</sub> sec. 9, T. 2 N., R. 18 E., at steel highway bridge a quarter of a mile southwest of Hailey.

Drainage area.- 640 square miles.

Records available.- June 1915 to September 1941.

Average discharge.- 26 years, 278 second-feet.

Extremes.- Maximum discharge during year, 1,800 second-feet May 27 (gage height, 4.99 feet); minimum, 1 second-foot Jan. 2-4, 10, 11, Jan. 27 to Feb. 21, Feb. 25-27.

1915-41: Maximum discharge, 4,480 second-feet June 7, 1938; maximum gage height, 8.66 feet June 12, 1921; practically no flow Sept. 15-23, Nov. 20, 22, 23, 1931, Oct. 25, 1937.

Remarks.- Records good except those for periods of no gage-height record and those below 10 second-feet, which are fair. Water diverted around station by Hailey power plant and returned to river through Big Wood Slough. Total flow of river at Hailey (combined flow of Big Wood River and Big Wood Slough) is given in table on following page. Diversions above station for irrigation.

Cooperation.- Gage-height record April to September furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	5	3	2	1	2	170	785	1,010	545	90	43
2	10	a7	4	1	1	2	197	755	910	520	81	42
3	39	11	4	1	1	2	192	785	910	520	a70	53
4	37	8	5	1	1	2	185	878	975	525	a50	45
5	25	5	4	2	1	2	190	845	910	502	a84	34
6	18	5	9	2	1	2	163	725	942	470	84	25
7	16	7	5	2	1	2	156	648	1,140	470	84	25
8	19	6	6	2	1	2	159	642	1,320	443	84	29
9	17	6	7	2	1	2	182	610	1,280	396	74	26
10	16	4	4	1	1	2	208	626	1,220	347	72	25
11	16	4	3	1	1	2	195	785	1,220	321	152	21
12	16	3	2	2	1	2	173	1,180	1,280	269	303	30
13	a16	3	2	2	1	2	177	1,560	1,400	227	190	29
14	a3	3	2	2	1	2	203	1,480	1,400	213	141	29
15	a3	3	2	2	1	2	247	1,250	1,400	208	106	22
16	a3	3	2	2	1	2	265	1,110	1,360	195	95	20
17	a3	2	3	2	1	2	247	1,110	1,280	175	104	18
18	a3	2	5	2	1	4	227	1,250	1,220	151	150	13
19	b3	2	5	2	1	8	208	1,080	1,220	173	112	11
20	a3	2	4	2	1	6	205	910	1,110	203	97	16
21	a2	2	3	2	1	10	213	910	1,010	173	102	14
22	a2	2	4	2	2	9	227	1,110	1,040	161	114	14
23	a2	2	5	2	2	6	269	1,320	1,110	152	110	14
24	a3	2	2	2	2	6	324	1,520	1,040	152	100	14
25	a110	2	2	2	1	8	317	1,560	942	128	106	10
26	a100	2	2	2	1	22	353	1,640	755	116	100	8
27	a140	3	2	1	1	62	425	1,680	703	130	88	9
28	a130	3	2	1	2	118	525	1,400	714	143	74	7
29	a120	4	2	1	-	156	632	1,180	642	135	76	6
30	a110	4	2	1	-	173	755	1,080	575	104	72	6
31	50	-	2	1	-	170	-	1,080	-	92	61	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,038	140	2	33.5	2,060
November.....	117	11	2	3.9	232
December.....	109	9	2	3.5	216
Calendar year 1940.....	92,672	1,880	1	253	183,800
January.....	52	2	1	1.7	103
February.....	32	2	1	1.1	63
March.....	792	173	2	25.5	1,570
April.....	7,997	755	156	267	15,860
May.....	33,494	1,680	610	1,080	66,430
June.....	31,978	1,400	575	1,066	63,430
July.....	8,367	645	92	270	16,600
August.....	3,226	303	50	104	6,400
September.....	654	53	6	21.8	1,300
Water year 1940-41.....	87,856	1,680	1	241	174,300

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

b Computed from staff-gage readings.

Combined discharge, in second-feet, of Big Wood River and Big Wood Slough at Hailey, Ohio,  
water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	215	220	171	114	134	165	360	942	1,200	741	271	253
2	249	222	170	118	141	162	389	930	1,100	718	262	262
3	311	226	173	104	140	155	386	972	1,100	714	250	265
4	276	218	171	121	140	158	379	1,060	1,170	719	237	253
5	248	204	167	141	141	153	384	1,040	1,100	694	223	243
6	233	209	172	145	145	153	357	917	1,130	654	217	235
7	221	216	168	153	154	153	354	842	1,340	652	216	234
8	218	215	164	153	154	160	353	849	1,540	630	217	236
9	213	211	165	152	152	168	366	817	1,500	586	227	233
10	208	194	148	149	152	166	392	827	1,430	534	264	230
11	202	192	119	151	152	172	388	981	1,420	497	356	223
12	199	171	106	146	152	178	388	1,380	1,480	450	542	232
13	199	163	90	148	138	170	400	1,770	1,620	413	421	230
14	201	179	84	156	145	164	418	1,670	1,620	394	356	228
15	202	187	92	155	148	166	470	1,440	1,610	380	319	223
16	197	191	103	150	147	178	486	1,290	1,560	375	304	224
17	190	200	132	141	147	182	452	1,280	1,410	375	309	217
18	187	206	151	153	148	200	426	1,430	1,400	374	360	214
19	184	190	153	153	149	217	407	1,260	1,410	371	354	213
20	176	184	151	152	145	221	407	1,090	1,290	365	299	226
21	175	195	156	152	142	225	412	1,080	1,190	353	298	226
22	175	178	160	152	143	232	428	1,290	1,210	345	310	223
23	174	160	167	148	143	229	470	1,520	1,300	336	304	224
24	175	165	166	145	146	229	525	1,710	1,230	336	294	221
25	298	184	165	142	137	231	526	1,740	1,120	327	302	211
26	290	172	159	142	121	245	568	1,830	923	325	298	206
27	269	161	171	121	131	285	629	1,890	879	334	287	205
28	257	171	145	118	142	333	729	1,590	890	342	272	200
29	243	179	141	130	-	350	836	1,380	818	333	274	198
30	232	178	153	130	-	365	939	1,280	757	297	270	192
31	210	-	159	131	-	362	-	1,270	-	284	263	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						6,827	311	174	220	13,540		
November.....						5,741	226	160	191	11,390		
December.....						4,591	173	84	148	9,110		
Calendar year 1940 .....						134,368	1,880	84	367	266,500		
January.....						4,366	156	104	141	8,660		
February.....						4,023	154	121	144	7,990		
March.....						6,527	365	153	211	12,960		
April.....						14,024	939	353	467	27,820		
May.....						39,377	1,890	817	1,270	78,100		
June.....						37,747	1,620	757	1,258	74,870		
July.....						14,268	741	284	460	28,300		
August.....						9,146	542	216	295	18,140		
September.....						6,770	265	192	226	13,430		
Water year 1940-41 .....						153,412	1,890	84	420	304,300		

## Big Wood River near Bellevue, Idaho

Location.- Water-stage recorder, lat. 43°19', long. 114°21', in sec. 20, T. 1 S., R. 18 E., 1½ miles upstream from flow line of Magic Reservoir, 3 miles upstream from Camas Creek, and 10 miles southwest of Bellevue.

Drainage area.- 823 square miles.

Records available.- July 1911 to September 1941 (except winters prior to 1940).

Extremes.- Maximum discharge during year, 1,270 second-feet May 27 (gage height, 3.16 feet); minimum, 41 second-feet Oct. 19 (gage height, 1.29 feet).

1911-41: Maximum discharge recorded, 3,600 second-feet June 16, 1921 (gage height, 6.07 feet); from rating curve extended above 2,800 second-feet; minimum recorded, 7 second-feet Apr. 14, 1932 (gage height, 1.10 feet).

Remarks.- Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation.

Cooperation.- Gage-height record and results of six discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	83	99	b65	b75	115	162	696	643	386	79	104
2	58	83	99	b62	b75	124	139	705	566	372	76	107
3	58	83	101	b62	b75	124	193	732	517	372	74	110
4	56	83	99	62	b75	a120	189	804	566	359	76	113
5	54	81	99	56	b75	a120	211	786	550	328	81	113
6	49	79	96	54	79	a120	193	714	550	281	86	110
7	49	88	96	56	86	a120	181	617	741	260	83	107
8	47	96	96	54	91	a120	181	574	957	239	79	110
9	45	91	96	54	96	a120	185	501	939	207	79	101
10	45	88	93	54	99	a130	230	456	840	174	86	88
11	45	93	91	51	101	a130	230	471	822	154	125	88
12	45	91	79	51	101	a130	207	687	840	141	255	91
13	43	91	69	51	96	a130	207	1,010	939	124	225	88
14	43	91	65	51	93	a130	225	1,100	921	113	154	88
15	43	91	56	51	96	a130	255	948	921	104	128	96
16	45	93	54	49	96	a130	298	786	895	96	118	96
17	45	96	54	49	91	a130	298	650	804	88	107	101
18	45	96	54	49	96	a130	281	786	768	91	113	96
19	49	93	60	49	96	a140	255	777	795	99	113	93
20	56	a93	67	54	96	a140	244	634	759	99	104	96
21	58	h93	86	65	96	a150	239	534	678	99	99	93
22	60	a90	83	71	96	158	244	617	678	91	96	93
23	62	a90	79	71	99	151	260	786	741	93	96	96
24	62	a95	79	74	107	151	304	957	696	96	101	99
25	69	101	69	76	107	147	346	1,030	600	99	107	96
26	76	99	62	79	99	138	352	1,140	486	96	107	93
27	86	96	67	74	99	138	406	1,240	456	101	107	91
28	86	96	60	b70	104	141	471	1,070	493	101	107	88
29	88	101	60	b70	-	147	558	894	463	96	110	86
30	88	101	60	b70	-	158	660	750	379	93	110	81
31	81	-	65	b70	-	154	-	705	-	86	107	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,794	88	43	57.9	3,560
November.....	2,745	101	79	91.5	5,440
December.....	2,393	101	54	77.2	4,750
Calendar year 1940.....	65,535	1,380	25	179	130,000
January.....	1,874	79	49	60.5	3,720
February.....	2,595	107	75	92.7	5,150
March.....	4,166	158	115	134	8,260
April.....	3,254	660	162	275	16,370
May.....	24,187	1,240	456	780	47,930
June.....	20,993	957	379	700	41,640
July.....	5,138	326	86	166	10,190
August.....	3,391	255	74	109	6,730
September.....	2,912	113	81	97.1	5,780
Water year 1940-41.....	80,422	1,240	43	220	159,500

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

b Stage-discharge relation affected by ice.

c Computed from staff-gage reading.

## Magic Reservoir near Richfield, Idaho

Location.- Staff gage at dam on Big Wood River, lat. 43°15', long. 114°22', in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 18, T. 2 S., R. 18 E., 18 miles northwest of Richfield. Datum of gage is referred to datum of Idaho Irrigation Co., which is reported to be about 137 feet below mean sea level.

Drainage area.- 1,500 square miles.

Records available.- February to April 1909 (gage heights only), April 1909 to September 1941.

Extremes.- Maximum contents during year, 192,700 acre-feet May 29, 30, June 9-20 (gage height, 4,935.3 feet); minimum, 82,670 acre-feet Oct. 1 (gage height, 4,897.7 feet). 1909-41: Maximum contents, those of May 29, 30, June 9-20, 1941; no storage for several days in 1909, 1919, 1920, 1924, 1928, 1935.

Remarks.- Reservoir is formed by earth and rock-fill dam, completed in 1909 and raised 5 feet in 1917. Capacity, 191,500 acre-feet, between gage heights 4,821.4 feet (2.9 feet above bottom of outlet pipe) and 4,935.0 feet (top of flash boards, 5 feet above crest of spillway). Dead storage unknown. Water is used for irrigation of lands in Carey Act project of Big Wood Canal Co. Figures given herein represent usable contents. Gage read twice daily; contents computed from morning reading.

Cooperation.- Gage-height record and capacity table furnished by watermaster for Big Wood and Little Wood Rivers.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82,670	86,620	89,770	95,660	99,620	106,800	132,800	176,800	192,300	188,400	158,900	131,100
2	82,680	86,620	89,990	95,660	100,300	107,000	135,100	176,800	191,900	187,600	154,900	130,800
3	83,100	86,840	90,220	96,800	100,300	107,300	137,400	177,000	191,500	188,000	153,600	129,700
4	83,320	87,060	90,480	96,800	100,600	107,800	140,100	178,100	191,800	189,800	152,600	129,100
5	83,320	87,290	90,690	96,270	100,600	108,000	142,600	178,900	191,500	189,500	151,700	128,500
6	83,320	87,510	90,910	96,500	100,800	108,500	144,400	179,800	191,100	189,900	150,700	127,700
7	83,530	87,730	91,140	96,500	101,300	108,800	146,600	180,400	191,500	188,800	149,400	126,900
8	83,530	87,960	91,370	96,500	101,800	109,300	148,100	181,100	191,900	187,600	148,100	126,300
9	83,750	88,180	91,600	96,740	101,800	109,500	149,700	181,900	192,700	188,400	146,900	125,800
10	83,750	88,410	91,830	96,740	102,000	110,100	151,700	181,900	192,700	188,300	146,900	124,900
11	83,750	88,640	92,060	96,740	102,300	110,300	153,300	181,900	192,700	184,100	146,000	124,100
12	83,970	88,860	92,060	96,740	102,800	110,800	155,300	182,200	192,700	183,000	144,400	123,600
13	83,970	88,860	92,290	96,980	103,000	111,100	157,300	182,600	192,700	181,500	143,600	122,700
14	84,190	89,080	92,290	97,220	103,300	111,600	159,300	183,800	192,700	180,000	142,800	121,900
15	84,190	89,320	92,520	97,460	103,300	112,100	161,000	184,900	192,700	178,900	142,800	121,100
16	84,410	89,540	92,620	97,460	103,500	112,400	162,400	186,100	192,700	177,400	141,300	120,300
17	84,410	89,770	92,760	97,690	103,800	112,900	163,400	186,400	192,700	176,900	140,700	119,800
18	84,410	89,990	92,980	97,690	104,000	113,700	164,800	186,800	192,700	174,100	140,100	119,000
19	84,630	89,990	93,220	97,930	104,300	114,500	166,200	187,600	192,700	172,500	139,500	118,400
20	84,630	90,220	93,220	97,930	104,500	116,300	167,800	187,600	192,700	171,200	138,900	117,600
21	84,630	89,540	93,450	98,170	104,800	116,800	168,000	188,000	192,300	169,700	138,300	116,800
22	84,860	88,860	93,680	98,410	105,000	117,500	169,400	188,000	192,300	168,500	137,400	116,000
23	85,070	88,180	93,920	98,650	105,300	118,700	170,100	188,000	192,300	166,900	136,800	115,600
24	85,070	88,180	94,150	98,650	105,600	119,800	170,800	188,400	191,900	165,600	136,800	115,000
25	85,290	88,410	94,380	98,890	105,600	120,900	171,600	188,200	191,900	164,100	136,700	114,200
26	85,510	88,640	94,620	99,130	106,800	121,900	171,900	189,900	191,500	163,000	136,100	113,700
27	85,730	88,860	94,850	99,370	106,000	123,300	172,800	190,700	191,100	162,000	134,800	113,200
28	85,730	89,080	95,090	99,620	106,500	124,400	172,600	191,900	190,300	160,600	133,600	112,400
29	85,960	89,320	95,090	99,620	-	125,800	173,300	192,700	189,900	159,300	133,100	111,900
30	86,170	89,540	95,320	99,620	-	128,000	174,400	192,700	189,200	158,300	132,600	111,100
31	86,400	-	95,560	99,620	-	130,800	-	192,300	-	157,300	131,800	-

Monthly gage height and contents, water year October 1940 to September 1941

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	97.6	82,450	-
Oct. 31.....	99.4	86,400	+3,950
Nov. 30.....	100.6	89,540	+3,140
Dec. 31.....	103.4	95,660	+6,020
Calendar year 1940.....	-	-	+38,170
Jan. 31.....	106.1	99,620	+4,060
Feb. 28.....	107.9	106,600	+6,980
Mar. 31.....	116.8	130,200	+23,700
Apr. 30.....	130.6	174,400	+44,200
May 31.....	135.2	192,300	+17,900
June 30.....	134.4	189,200	-3,100
July 31.....	128.6	157,300	-31,900
Aug. 31.....	117.4	131,900	-25,400
Sept. 30.....	109.7	111,100	-20,800
Water year 1940-41.....	-	-	+28,650



Big Wood River below Magic Dam, near Richfield, Idaho

Location.- Water-stage recorder, lat.  $43^{\circ}14'$ , long.  $114^{\circ}22'$ , in sec. 18, T. 2 S., R. 18 E., half a mile downstream from Magic Dam and 18 miles northwest of Richfield.

Records available.- April 1911 to September 1941.

Average discharge.- 29 years (1912-41), 380 second-feet.

Extremes.- Maximum discharge during year, 1,140 second-feet June 15 (gage height, 4.81 feet); minimum, 10 second-feet Nov. 24-29, Dec. 15-22, 25, 26, Dec. 28 to Jan. 4, Jan. 6-21, Jan. 26 to Feb. 6; minimum gage height, 1.41 feet Jan. 15.  
1911-41: Maximum discharge, 5,610 second-feet Apr. 21, 1938 (gage height, 11.55 feet); no flow Feb. 3, 1915.

Remarks.- Records good. Many ranch diversions in upper drainage area. Flow regulated by Magic Reservoir (see p. 98).

Cooperation.- Gage-height record and six discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	12	11	10	10	12	14	500	843	832	645	h440
2	12	12	11	10	10	12	14	505	782	f210	645	h440
3	12	12	11	10	10	12	14	535	716	h24	640	f467
4	12	12	11	10	10	12	14	557	700	a25	640	465
5	13	12	11	11	10	12	13	574	689	26	640	465
6	13	12	11	10	10	12	14	579	650	f677	656	465
7	13	12	11	10	11	12	14	579	672	h826	684	h465
8	13	12	11	10	11	12	14	612	788	f906	689	h465
9	13	12	11	10	11	12	14	623	958	810	694	f470
10	12	11	11	10	11	12	14	623	997	826	689	475
11	12	11	11	10	11	12	14	640	986	832	h689	475
12	12	12	11	10	11	12	14	672	986	832	f656	475
13	12	12	11	10	11	12	14	667	1,010	832	f608	475
14	12	12	11	10	11	12	15	684	1,080	832	h557	495
15	12	12	10	10	11	12	15	684	1,110	843	f612	505
16	12	12	10	10	11	12	15	689	1,030	860	500	485
17	12	12	10	10	11	12	15	689	920	865	480	475
18	12	12	10	10	11	12	16	700	876	876	f447	475
19	12	12	10	10	11	12	16	706	904	854	h435	475
20	12	360	10	10	11	12	16	689	870	838	h435	475
21	12	460	10	10	11	12	16	672	826	838	h435	475
22	12	445	10	11	12	12	17	667	782	826	h430	475
23	12	167	11	11	12	12	79	694	766	821	h426	455
24	12	10	11	11	12	12	268	706	f826	810	h426	450
25	12	10	10	11	12	12	312	706	h772	782	h426	445
26	12	10	10	10	12	12	360	700	f779	755	h422	450
27	12	10	11	10	12	12	360	744	h794	738	h422	435
28	12	10	10	10	12	13	394	854	f814	722	h422	426
29	12	10	10	10	-	13	412	1,000	f821	706	h426	426
30	12	11	10	10	-	13	460	980	h821	684	h435	194
31	12	-	10	10	-	13	-	898	-	656	h440	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							377	13	12	12.2	749	
November.....							1,729	460	10	57.6	3,430	
December.....							327	11	10	10.5	649	
Calendar year 1940.....							93,299	838	7	255	185,100	
January.....							315	11	10	10.2	625	
February.....							309	12	10	11.0	613	
March.....							376	13	12	12.1	746	
April.....							2,967	460	13	98.9	5,880	
May.....							21,128	1,000	500	682	41,910	
June.....							25,518	1,110	650	851	50,610	
July.....							21,864	876	24	705	43,370	
August.....							16,651	694	422	537	33,030	
September.....							13,648	505	194	455	27,070	
Water year 1940-41.....							105,209	1,110	10	288	206,700	

a No gage-height record; discharge interpolated.

f Fragmentary gage-height record; discharge computed from partially estimated gage heights.

h Computed from staff-gage readings.

## Big Wood River at Gooding, Idaho

Location.- Water-stage recorder, lat.  $42^{\circ}57'$ , long.  $114^{\circ}43'$ , in NE $\frac{1}{4}$  sec. 31, T. 5 S., R. 15 E., 30 feet downstream from highway bridge and half a mile north of Gooding.

Records available.- June 1896 to October 1899 (published as Malade River at Toponis, Idaho), and April 1921 to September 1940, except for winters.

Extremes.- Maximum discharge recorded during year, 204 second-feet Apr. 23 (gage height, 2.44 feet); probably no flow for long periods.  
1921-41: Maximum discharge recorded, 3,900 second-feet Apr. 23, 1938 (gage height, 8.48 feet), from rating curve extended above 3,200 second-feet; no flow for long periods in each year.

Remarks.- Records good. Many diversions above and below station for irrigation. Flow regulated by Magic Reservoir (see p. 98) and affected by deliveries from Milner-Gooding canal which diverts from Snake River.

Cooperation.- Gage-height record and results of three-discharge measurements furnished by Watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42						0	87	107	81	71	h29
2	2						0	87	104	79	59	h33
3	0						0	69	104	71	49	h32
4	0						0	60	98	55	49	h42
5	0						0	77	96	59	40	h42
6	0						0	85	96	46	33	44
7	0						0	85	111	48	35	40
8	0						0	59	133	54	14	h43
9	0						0	75	138	52	14	h42
10	0						0	66	142	51	12	h40
11	0						46	60	133	66	15	52
12	0						55	57	135	67	27	79
13	0						54	49	113	73	36	89
14	0						51	37	83	69	27	87
15	0						46	37	59	67	22	79
16	0						39	30	52	69	21	60
17	0						36	27	54	66	18	62
18	0						34	22	73	71	27	64
19	0						36	40	69	91	25	49
20	0						38	64	59	87	16	37
21	0						32	67	49	91	17	33
22	0						23	66	39	79	28	h34
23	0						130	51	34	77	31	40
24	0						66	49	38	77	35	59
25	0						113	46	42	75	32	46
26	0						109	57	46	79	30	h48
27	0						98	79	52	81	29	43
28	0						116	81	59	87	31	36
29	0						102	100	75	85	27	35
30	0						73	93	79	79	h23	h34
31	0						-	102	-	77	h29	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							44	42	0	1.4	87	
November.....							-	-	-	-	-	
December.....							-	-	-	-	-	
Calendar year .....							-	-	-	-	-	
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							1,297	130	0	43.2	2,570	
May.....							1,954	102	22	63.0	3,880	
June.....							2,477	142	34	82.6	4,910	
July.....							2,209	91	46	71.3	4,380	
August.....							922	71	12	29.7	1,830	
September.....							1,453	89	29	48.4	2,880	
Water year .....							-	-	-	-	-	

h Computed from staff-gage readings.

## Big Wood River near Gooding, Idaho

Location.- Water-stage recorder, lat. 42°54', long. 114°48', in sec. 21, T. 6 S., R. 14 E., at Hudson Ranch, 2 miles downstream from bridge on Bliss-Gooding highway,  $\frac{3}{4}$  miles downstream from Little Wood River, 5 miles upstream from diversion dam for King Hill project, and 6 miles southwest of Gooding.

Records available.- March 1916 to September 1941 (no winter records prior to 1936).

Average discharge.- 10 years, (1916-22, 1937-41), 171 second-feet.

Extremes.- Maximum discharge during year, 298 second-feet Apr. 23 (gage height, 3.05 feet); no flow at times during October, November, and January. 1916-41: Maximum discharge, 3,810 second-feet Apr. 23, 1938, from rating curve extended above 3,200 second-feet; maximum gage height, 9.00 feet Mar. 17, 1922; no flow at times in each year.

Remarks.- Records good except those for Dec. 10 to Feb. 10, which are poor. Diversions above and below station for irrigation. Flow regulated by Magic Reservoir (see p. 98) and affected by deliveries from canals diverting from Snake River at Milner.

Cooperation.- Gage-height record for April to September and results of two discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers. Gage-height record for October to March furnished by North Side Canal Co., Ltd.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	1	32	25	b25	61	3	72	93	54	80	36
2	71	2	32	17	b25	129	9	47	93	43	67	37
3	51	4	31	b10	b30	117	10	53	91	34	57	61
4	48	4	*54	b1	b55	88	10	40	58	20	56	61
5	48	3	30	b0	b55	67	13	42	81	14	54	63
6	33	5	29	0	b45	70	39	60	76	14	47	56
7	20	6	30	b2	48	69	41	67	114	17	44	53
8	17	16	30	b15	40	71	66	77	204	16	42	51
9	8	18	29	b20	43	75	67	72	220	21	33	55
10	6	20	23	35	51	65	24	55	207	23	34	59
11	2	22	b10	34	57	63	40	49	196	26	37	51
12	1	21		41	*132	61	78	41	160	32	55	70
13	0	18		39	207	53	78	32	129	40	76	76
14	0	20		30	155	51	74	17	82	40	84	76
15	0	38		*30	96	48	56	20	40	27	69	75
16	1	40	b20	24	83	41	30	23	22	26	42	58
17	13	34		b30	68	48	30	21	20	27	40	51
18	20	34		22	55	46	25	16	33	30	44	54
19	14	89		b40	52	30	31	36	48	48	53	37
20	11	117		57	30	43	48	55	34	51	34	28
21	7	175	64	32	46	33	44	55	21	56	22	29
22	8	187	49	24	55	35	23	48	17	46	33	42
23	13	117	57	21	83	38	163	31	18	44	36	55
24	13	162	46	22	135	37	155	22	13	49	36	77
25	14	158	52	25	150	30	20*	12	13	58	37	78
26	17	114	48	27	90	30	189	20	20	59	39	76
27	16	83	b50	21	56	22	156	59	29	66	40	75
28	15	91	b45	b25	43	12	167	59	35	77	35	69
29	14	89	40	b25	-	4	143	77	48	75	31	63
30	3	89	40	b25	-	3	93	89	66	76	32	66
31	1	-	26	b25	-	2	-	55	-	77	32	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....				595		110	0	19.2	1,180			
November.....				1,777		187	1	59.2	3,520			
December.....				1,004		64	-	32.4	1,990			
Calendar year 1940.....				25,009		1,120	0	68.3	49,600			
January.....				589		41	0	22.2	1,370			
February.....				1,988		207	25	71.0	3,940			
March.....				1,527		129	2	49.3	3,050			
April.....				2,112		207	3	70.4	4,190			
May.....				1,452		89	12	46.8	2,890			
June.....				2,316		220	13	77.2	4,690			
July.....				1,286		77	14	41.5	2,580			
August.....				1,421		64	22	45.8	2,820			
September.....				1,728		73	28	57.5	3,430			
Water year 1940-41.....				17,895		220	0	49.0	35,490			

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

## BIG WOOD RIVER BASIN

Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho

Location.- Staff gage, lat. 43°41', long. 114°25', in NE¼ sec. 15, T. 4 N., R. 17 E., at Guyer Hot Springs, 2 1/8 miles upstream from mouth and 2.2 miles west of Ketchum.

Drainage area.- 96 square miles.

Records available.- November 1940 to September 1941. May 1920 to September 1921 at site one-quarter mile downstream, published as Warm Springs Creek near Ketchum, Idaho; records not equivalent.

Extremes.- Maximum discharge observed during period, 400 second-feet May 13 (gage height, 2.68 feet); minimum observed, 18 second-feet Feb. 26 (gage height, 0.89 foot).

Remarks.- Records good except those for period July 27 to Sept. 30, which are fair. Diversions above and below station for irrigation. Gage read twice daily November to July 26; once daily Aug. 8 to Sept. 30.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Mar. 4 to May 13)

0.9	19	1.4	73	2.1	216
1.0	26	1.6	107	2.4	300
1.2	46	1.8	147	2.7	400

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	30	28	23	31	66	192	216	94	a45	a41
2		-	30	23	26	28	72	192	192	89		40
3		-	30	31	26	29	70	216	204	86	a40	a40
4		-	30	30	25	30	69	229	204	85		a40
5		-	29	30	25	30	67	216	187	79	a40	40
6		-	30	32	25	29	63	192	185	78		a40
7		-	28	31	31	30	63	178	216	72	a40	a40
8		-	28	30	30	31	62	185	229	70		40
9		-	28	30	30	32	67	183	229	67	a52	39
10		-	28	28	30	30	72	192	204	65	65	a58
11		-	25	28	30	32	66	242	204	66	a72	37
12		-	27	26	30	34	70	330	204	65	79	a58
13		-	25	29	28	32	75	362	204	60	56	39
14		-	22	30	28	26	78	348	204	58	a50	a59
15		-	21	28	29	30	94	300	192	58		39
16		-	23	25	29	34	94	258	185	56	a50	a58
17		-	25	28	30	40	97	270	171	56		38
18		-	25	30	30	47	75	285	169	52	59	a58
19		-	28	28	30	50	75	256	180	54		a58
20		-	28	28	28	47	72	242	165	59	a50	a58
21		-	28	28	28	47	72	242	145	55		a58
22		-	30	28	28	50	72	256	141	51	51	a57
23		-	30	28	28	a51	81	270	126	50		a57
24		-	30	28	29	a51	88	285	122	47	a48	a37
25		-	30	28	25	52	95	300	118	47	46	37
26		-	30	28	20	56	102	300	111	47	a46	a56
27		-	31	30	28	63	126	315	111		46	a56
28		30	30	26	30	69	145	270	122	a50	a44	35
29		33	30	28	-	69	169	242	109		42	a55
30		31	30	25	-	69	167	228	100		a41	35
31		-	29	25	-	69	-	229	-		a41	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						-	-	-	-	-		
November.....						-	-	-	-	-		
December.....						871	31	21	28.1	1,730		
Calendar year .....						-	-	-	-	-		
January.....						873	32	23	28.2	1,730		
February.....						778	31	20	27.8	1,540		
March.....						1,316	69	26	42.5	2,610		
April.....						2,605	187	62	86.8	5,170		
May.....						7,853	382	178	253	15,580		
June.....						5,147	229	100	172	10,210		
July.....						1,914	94	-	61.7	3,800		
August.....						1,523	79	-	49.1	3,020		
September.....						1,142	41	35	38.1	2,270		
The period.....						-	-	-	-	47,660		

a No gage-height record; discharge interpolated or computed on basis of record for Big Wood River at Halley and Big Wood Slough near Halley.

## Big Wood Slough at Hailey, Idaho

Location.- Water-stage recorder, lat. 43°31', long. 114°19'30" in sec. 9, T. 2 N., R. 18 E., at highway bridge, an eighth of a mile northeast of steel highway bridge over Big Wood River, and an eighth of a mile southwest of Hailey.

Records available.- June 1915 to September 1941.

Average discharge.- 26 years, 114 second-feet.

Extremes.- Maximum discharge during year, 297 second-feet Apr. 14 (gage height, 3.52 feet); minimum, 48 second-feet Nov. 13 (gage height, 1.80 feet).  
1915-41: Maximum discharge observed, 419 second-feet June 8, 1921, from rating curve extended above 280 second-feet; maximum gage height, 5.55 feet (elevation of top of ice in well) Jan. 20-23, 1937; no flow May 8, 1931, Oct. 20 to Nov. 3, 1938.

Remarks.- Records good. Flow affected by Hailey power plant half a mile upstream. Big Wood Slough, a natural channel of Big Wood River, is utilized as a tailrace for the power plant, and its discharge plus the discharge of Big Wood River at Hailey, Idaho, equals the total flow of river at this point.

Cooperation.- Gage-height record April to September furnished by watermaster for Big and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	a215	168	112	133	163	190	157	190	196	181	210
2	239	215	166	117	140	160	192	175	192	198	181	210
3	272	215	169	103	139	153	194	187	192	194	180	212
4	239	210	166	120	139	156	194	184	192	194	187	210
5	223	199	163	139	140	151	194	190	192	192	139	209
6	215	204	163	143	144	151	194	192	190	184	133	210
7	205	209	163	151	153	151	198	204	202	182	132	209
8	199	209	158	151	153	158	194	h207	223	187	133	207
9	196	205	158	150	151	166	184	h207	215	190	153	207
10	192	190	144	148	151	164	184	201	210	187	192	205
11	186	188	116	150	151	170	193	186	201	176	204	202
12	194	185	103	144	151	176	215	193	204	151	239	202
13	184	160	88	146	137	168	223	207	223	186	231	201
14	198	176	82	154	144	162	215	188	215	151	215	199
15	199	184	90	153	147	164	223	186	210	172	213	201
16	194	188	101	148	146	176	223	178	201	180	209	204
17	187	198	129	139	146	180	205	172	194	202	205	201
18	184	204	146	151	147	196	199	184	178	213	210	201
19	181	183	148	151	147	209	199	184	186	198	212	202
20	173	182	147	150	144	215	202	178	181	182	202	210
21	173	193	153	150	141	215	199	174	178	180	196	212
22	173	176	156	150	141	223	201	h180	174	184	196	209
23	172	168	162	146	141	223	201	204	188	184	194	210
24	172	163	164	143	144	223	201	190	187	184	194	207
25	188	182	163	140	136	223	209	178	174	199	196	201
26	190	170	157	140	120	223	205	190	168	209	198	198
27	129	158	169	120	a130	223	204	207	176	204	199	196
28	127	168	143	117	a140	215	204	190	176	199	198	193
29	123	175	139	129	-	194	204	199	176	198	198	192
30	122	174	151	129	-	192	184	202	182	193	198	186
31	160	-	157	130	-	192	-	190	-	192	202	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	5,789	272	122	187	11,480
November.....	5,624	215	158	187	11,160
December.....	4,482	169	82	145	8,890
Calendar year 1940.....	41,777	272	1	114	82,880
January.....	4,314	154	103	139	8,560
February.....	3,996	153	120	143	7,930
March.....	5,735	223	151	185	11,380
April.....	6,027	223	184	201	11,950
May.....	5,879	207	167	190	11,660
June.....	5,770	223	168	192	11,440
July.....	5,901	213	172	190	11,700
August.....	5,920	239	152	191	11,740
September.....	6,116	212	166	204	12,130
Water year 1940-41.....	65,553	272	82	180	130,000

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

b Computed from staff-gage readings.

## Camas Creek near Blaine, Idaho

Location.- Water-stage recorder, lat. 43°20', long. 114°33', in sec. 15, T. 1 S., R. 16 E., a quarter of a mile north of Macon siding on Hill City branch of Oregon Short Line R. R., three-eighths of a mile downstream from Willow Creek, 2½ miles upstream from backwater of Magic Reservoir, and 4 miles southeast of Blaine.

Drainage area.- 618 square miles.

Records available.- May 1912 to September 1941, except for winters. Discharge measurements only for 1922.

Extremes.- Maximum discharge during year, 1,060 second-feet Mar. 31 (gage height, 5.73 feet); minimum recorded, 2.3 second-feet Aug. 11 (gage height, 1.02 feet).  
1921-41: Maximum discharge recorded, 8,690 second-feet about Apr. 18, 1939 (gage height, 15.48 feet, from floodmark), from rating curve extended above 6,000 second-feet; minimum recorded, 1.5 second-feet Aug. 23, 1940.

Remarks.- Records good. Many small diversions above station; no appreciable regulation.

Cooperation.- Gage-height record and three measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6				-	27	948	296	136	37	3.1	4.2
2	9.9				-	32	912	296	123	36	3.0	4.2
3	13				-	32	965	306	117	33	3.1	4.2
4	5.4				-	39	895	311	109	27	3.1	4.2
5	4.2				-	45	808	318	104	22	3.0	4.2
6	3.8				-	45	774	316	97	19	3.0	4.1
7	3.4				-	46	808	294	112	16	3.0	4.1
8	3.4				-	46	588	282	126	12	3.0	4.2
9	3.4				-	47	516	265	145	10	3.0	4.2
10	3.4				-	55	574	247	147	8.4	3.0	4.1
11	3.3				-	61	588	239	132	7.1	18	3.8
12	3.3				-	66	842	239	119	6.2	13	3.8
13	3.1				-	66	709	252	107	6.0	7.1	3.6
14	3.1				-	63	588	266	95	5.8	6.4	4.2
15	3.3				-	68	474	270	98	5.1	5.3	4.9
16	3.4				-	82	418	254	95	4.9	3.8	5.5
17	3.3				-	114	378	236	97	4.6	3.6	5.5
18	3.3				-	153	352	217	97	4.4	4.2	5.5
19	3.3				-	161	299	202	100	4.2	5.1	5.7
20	3.3				-	179	272	187	97	4.4	4.4	5.7
21	3.3				-	252	250	171	90	3.8	4.2	6.0
22	3.3				-	282	239	151	84	3.9	4.1	6.6
23	3.4				-	291	234	136	73	3.4	4.2	7.1
24	-				23	352	234	126	60	3.4	4.1	7.5
25	-				21	378	234	126	51	3.3	4.1	7.3
26	-				18	405	239	132	46	3.6	4.1	7.3
27	-				18	446	241	140	40	3.6	4.4	7.1
28	-				24	502	245	145	41	4.2	4.9	6.9
29	-				-	709	259	155	39	4.1	4.4	7.1
30	-				-	882	272	136	36	3.4	4.2	7.1
31	-				-	1,060	-	130	-	3.3	4.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October 1-23.....						96.2	13	3.1	4.18	191		
November.....						-	-	-	-	-		
December.....						-	-	-	-	-		
Calendar year .....						-	-	-	-	-		
January.....						-	-	-	-	-		
February 24-28.....						104	24	18	20.8	206		
March.....						7,086	1,060	27	229	14,060		
April.....						15,355	265	234	505	30,060		
May.....						6,839	318	126	221	13,560		
June.....						2,813	147	36	93.8	5,580		
July.....						313.1	37	3.3	10.1	621		
August.....						148.1	18	3.0	4.78	294		
September.....						159.9	7.5	3.6	5.33	317		
Water year .....						-	-	-	-	-		

## Lincoln canal near Richfield, Idaho

Location.- Water-stage recorder, lat. 43°10', long. 114°19', in sec. 9, T. 3 S., R. 18 E., at head of canal, 100 yards east of Shoshone-Hailey highway, 5½ miles downstream from Magic Dam, and 12 miles northwest of Richfield.

Records available.- April 1925 to September 1941 (prior to 1937, irrigation seasons only).

Extremes.- Maximum discharge during year, 226 second-feet June 28; maximum gage height, 2.22 feet Aug. 11; no flow for long periods.  
1925-41: Maximum discharge, 706 second-feet May 28, 1927 (gage height, 4.00 feet), from rating curve extended above 600 second-feet; no flow during long periods in each year.

Remarks.- Records good. Canal diverts water from right bank of Big Wood River in sec. 9, T. 3 S., R. 18 E., from which point it approximately parallels river for 10 miles to head of North Gooding canal in sec. 15, T. 4 S., R. 18 E., where water is either diverted into North Gooding canal or returned to Big Wood River. Canal is used to avoid large channel losses in natural bed of river. No diversions above gage.

Cooperation.- Gage-height record and results of five discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0					0	162	186	201	140	128
2		0					0	162	184	117	140	126
3		0					0	165	181	0	142	127
4		0					0	170	181	0	144	127
5		0					0	170	176	0	144	130
6		0					0	164	161	120	176	132
7		0					0	161	162	191	199	132
8		0					0	157	167	186	208	133
9		0					0	156	157	194	208	134
10		0					0	157	156	210	208	133
11		0					0	156	153	212	210	132
12		0					0	177	167	212	201	133
13		0					0	159	176	210	192	133
14		0					0	164	176	210	177	136
15		0					0	157	176	210	138	145
16		0					0	159	176	212	132	144
17		0					0	159	174	212	136	142
18		0					0	161	172	192	122	140
19		0					0	164	174	186	121	142
20		56					0	162	179	181	126	142
21		138					0	156	182	181	127	140
22		136					0	153	179	181	128	140
23		78					0	154	184	177	130	138
24		0					41	161	194	177	132	128
25		0					118	161	186	164	133	130
26		0					145	159	184	162	134	130
27		0					153	170	191	162	134	127
28		0					156	187	201	162	136	120
29		0					159	189	196	157	133	117
30		0					164	189	198	154	130	82
31		-					-	186	-	142	132	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						408	138	0	13.6	809		
December.....						0	0	0	0	0		
Calendar year 1940 .....						23,092	198	0	63.1	45,810		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						0	0	0	0	0		
April.....						936	164	0	31.2	1,860		
May.....						5,107	189	153	165	10,130		
June.....						5,329	201	153	178	10,570		
July.....						5,076	212	0	164	10,070		
August.....						4,713	210	121	152	9,360		
September.....						3,943	145	82	131	7,820		
Water year 1940-41 .....						25,511	212	0	66.9	50,610		

## BIG WOOD RIVER BASIN

Lincoln canal near Shoshone, Idaho

Location.- Water-stage recorder, lat. 43°05', long. 114°19', in sec. 15, T. 4 S., R. 18 E., a quarter of a mile upstream from outlet of canal, 7 miles west of Richfield, 11 miles northeast of Shoshone, and 12½ miles downstream from Magic Dam.

Records available.- May 1925 to September 1941 (1929-36, irrigation seasons only).

Extremes.- Maximum discharge during year, 193 second-feet July 17 (gage height, 1.26 feet); no flow for long periods.

1925-41: Maximum discharge, 667 second-feet May 29, 1927 (gage height, 2.48 feet), from rating curve extended above 550 second-feet; no flow for long periods each year.

Remarks.- Records good. Canal diverts water from right bank of Big Wood River in sec. 9, T. 3 S., R. 18 E., from which point it approximately parallels river for 10 miles to head of North Gooding canal in sec. 15, T. 4 S., R. 18 E., where water is either diverted into North Gooding canal or returned to Big Wood River. Canal is used to avoid large channel losses in natural bed of river. Five ditches have rights to divert 12.5 second-feet above this station for irrigation.

Cooperation.- Gage-height record and results of two discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	0					0	134	160	170	123	106
2	12	0					0	131	160	143	125	102
3	0	0					0	131	157	12	121	102
4	0	0					0	139	157	3	121	104
5	0	0					0	140	157	2	121	104
6	0	0					0	136	143	37	134	106
7	0	0					0	134	143	162	162	108
8	0	0					0	131	150	167	170	108
9	0	0					0	127	140	164	172	110
10	0	0					0	129	138	186	174	110
11	0	0					0	127	131	186	180	112
12	0	0					0	143	136	190	180	110
13	0	0					0	131	145	190	170	110
14	0	0					0	136	145	190	164	114
15	0	0					0	129	145	190	131	121
16	0	0					0	131	145	190	116	118
17	0	0					0	131	145	190	123	118
18	0	0					0	134	140	180	112	118
19	0	0					0	138	140	167	108	118
20	0	0					0	138	143	162	108	118
21	0	99					0	131	145	162	110	118
22	0	108					0	129	143	162	110	121
23	0	108					0	129	145	157	110	121
24	0	15					0	134	157	157	110	112
25	0	0					73	134	152	147	110	112
26	0	0					108	134	152	143	108	112
27	0	0					118	138	157	143	110	110
28	0	0					123	162	170	143	110	104
29	0	0					125	167	167	138	110	104
30	0	0					131	167	167	136	106	100
31	0	-					-	162	-	127	106	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						14	12	0	0.5	28		
November.....						330	108	0	11.0	655		
December.....						0	0	0	0	0		
Calendar year 1940 .....						19,020	157	0	52.0	37,720		
January.....						0	0	0	0	0		
February.....						0	0	0	0	0		
March.....						0	0	0	0	0		
April.....						678	131	0	22.6	1,540		
May.....						4,256	167	127	137	8,440		
June.....						4,475	170	131	149	8,880		
July.....						4,494	180	2	145	8,910		
August.....						4,011	190	106	129	7,960		
September.....						3,331	121	100	111	6,610		
Water year 1940-41 .....						21,689	190	0	59.2	42,820		

f Computed on basis of partly estimated gage-height record.



## Thorn Creek spillway near Gooding, Idaho

Location.- Water-stage recorder, lat. 43°01', long. 114°37', in sec. 6, T. 5 S., R. 16 E., 600 feet downstream from point of diversion from North Gooding canal, 900 feet upstream from Thorn Creek, and 7½ miles northeast of Gooding.

Records available.- April 1928 to September 1940 (prior to 1937, irrigation seasons only).

Extremes.- Maximum discharge during year, 246 second-feet Apr. 23 (gage height, 2.22 feet); no flow for long periods.

1928-41: Maximum discharge, 447 second-feet Apr. 24, 1938 (gage height, 2.90 feet), from rating curve extended above 400 second-feet; usually no flow during nonirrigation seasons.

Remarks.- Records good. Spillway diverts from North Gooding canal and discharges into Thorn Creek in sec. 6, T. 5 S., R. 16 E. It is utilized as part of plan to minimize losses from natural channel of Big Wood River.

Cooperation.- Gage-height record and results of six discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	0					0	150	154	152	138	101
2	2	0					0	156	152	156	127	98
3	0	0					0	150	152	148	120	98
4	0	0					0	148	146	138	120	106
5	0	0					0	160	140	137	103	108
6	0	0					0	160	137	127	95	108
7	0	0					0	162	152	127	90	108
8	0	0					0	162	176	138	75	108
9	0	0					5	150	174	135	74	106
10	0	0					60	144	176	146	71	100
11	0	0					65	140	162	154	79	118
12	0	0					67	138	150	156	92	131
13	0	0					68	131	135	160	101	135
14	0	0					67	115	116	158	92	129
15	0	0					57	109	106	158	80	120
16	0	0										
17	0	0					52	98	106	156	89	109
18	0	118					49	95	120	158	89	109
19	0	90					51	95	133	166	97	101
20	0	105					55	124	131	174	89	88
21	0	129					54	137	122	176	83	83
22	0	5										
23	0	0					44	142	113	172	88	80
24	0	0					94	135	105	162	97	82
25	0	0					146	124	97	160	97	92
26	0	0					129	118	109	158	97	98
27	0	0					172	113	115	158	95	90
28	0	0										
29	0	0					172	120	120	158	95	94
30	0	0					187	137	133	162	97	89
31	0	-					200	144	135	164	95	80
							178	158	148	158	92	77
							164	154	160	150	92	42
							-	152	-	150	92	-
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October				15		13	0	0.5	30			
November				447		129	0	14.9	887			
December				0		0	0	0	0			
Calendar year 1940				23,574		227	0	64.4	46,760			
January				0		0	0	0	0			
February				0		0	0	0	0			
March				0		0	0	0	0			
April				2,126		200	0	70.9	4,220			
May				4,212		162	95	136	8,350			
June				4,067		176	97	136	8,070			
July				4,772		176	127	154	9,470			
August				2,941		135	71	94.9	5,830			
September				2,988		135	42	99.6	5,930			
Water year 1940-41				21,568		200	0	59.1	42,790			

h Computed from staff-gage reading.

## BIG WOOD RIVER BASIN

Little Wood River at Campbell Ranch, near Carey, Idaho

Location.- Water-stage recorder, lat. 43°28', long. 114°03', in SW¼NW¼ sec. 35, T. 2 N., R. 20 E., at Campbell Ranch, above flow line of Little Wood Reservoir, 1½ miles downstream from High Five Creek, 2½ miles downstream from Muldoon Creek, 11 miles east of Bellevue, and 12 miles (revised) northwest of Carey. Former gage at same site and at datum 0.024 foot lower.

Drainage area.- 267 square miles.

Records available.- February 1920 to September 1926 (published as Little Wood River near Carey), March to September 1941.

Extremes.- Maximum discharge during period, 466 second-feet May 13 (gage height, 2.73 feet); minimum, 39 second-feet Aug. 7 (gage height, 0.92 foot).

1920-26, 1941: Maximum discharge recorded, 1,030 second-feet June 12, 1921, and May 26, 1922; minimum, 14 second-feet Aug. 29, 30, 1926.

Remarks.- Records excellent. Flow affected by Campbell Reservoir (capacity, 2,700 acre-feet) on unnamed tributary. Diversions for irrigation from Muldoon Creek, a tributary above station.

Cooperation.- Gage-height record furnished by Little Wood Irrigation District.

Rating table, Mar. 22 to Sept. 30 (gage height, in feet, and discharge, in second-feet)

0.9	37	1.8	174	2.7	453
1.2	67	2.1	249		
1.5	114	2.4	342		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						-	246	306	222	146	52	53
2						-	349	309	204	144	50	54
3						-	328	326	212	140	45	57
4						-	278	322	220	135	44	57
5						-	399	306	214	132	44	53
6						-	261	278	217	123	43	51
7						-	227	261	272	123	41	53
8						-	210	272	290	112	40	54
9						-	204	258	288	104	42	55
10						-	312	358	230	95	56	52
11						-	272	294	236	91	102	51
12						-	241	384	261	86	161	53
13						-	227	441	281	81	123	55
14						-	230	410	290	78	99	54
15						-	249	349	290	78	87	54
16						-	252	294	278	73	80	53
17						-	227	275	261	68	81	52
18						-	204	322	246	65	75	51
19						-	186	290	264	66	70	52
20						-	176	255	230	77	67	57
21						-	172	261	207	67	67	59
22						106	174	300	214	62	50	57
23						106	181	342	222	60	75	62
24						111	186	370	202	59	67	62
25						123	192	360	188	57	66	60
26						144	207	366	163	55	65	59
27						170	227	366	159	56	61	59
28						195	244	306	165	61	60	60
29						210	264	264	152	56	57	60
30						236	294	241	144	55	57	59
31						230	-	241	-	53	55	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March 22-31.....						1,631	236	106	163	3,240		
April.....						7,217	399	172	241	14,310		
May.....						9,627	441	241	311	19,090		
June.....						8,792	290	144	286	13,470		
July.....						2,661	146	65	85.8	5,280		
August.....						2,115	181	40	68.2	4,200		
September.....						1,660	62	51	55.3	3,290		
The period.....						-	-	-	-	62,880		

## Little Wood River near Carey, Idaho

Location.- Water-stage recorder, lat. 43°23', long. 114°00', in E½ sec. 30, T. 1 N., R. 21 E., a third of a mile upstream from West canal, 1-1/3 miles upstream from East canal, 2 miles downstream from Little Fish Creek, 3 miles downstream from Little Wood Reservoir, and 6 miles northwest of Carey.

Drainage area.- 312 square miles.

Records available.- April 1904 to May 1905, September 1926 to September 1941.

Average discharge.- 13 years (1926-27, 1929-41), 118 second-feet.

Extremes.- 1939-40: Maximum daily discharge during year, 600 second-feet Mar. 27; minimum discharge recorded, 10 second-feet Jan. 29 (gage height, 1.98 feet).

1940-41: Maximum discharge during year, 468 second-feet Apr. 2; maximum gage height, 4.45 feet (ice effect) Jan. 18; minimum discharge, 4 second-feet Feb. 17 (gage height, 1.63 feet).

1904-5, 1926-41: Maximum discharge, 6,000 second-feet (due to failure of reservoirs on Little Fish Creek) Apr. 20, 1938 (gage height, 12.07 feet, datum then in use, from floodmark), from rating curve extended above 1,800 second-feet; minimum, that of Feb. 17, 1941.

Remarks.- Records good except those for Nov. 4-7, Dec. 29-31, 1939, Jan. 12 to Feb. 1, Mar. 13 to June 10, Nov. 21-25, and Dec. 9, 1940, to Jan. 31, 1941, which are fair. Regulation and diversions above station for irrigation. Storage in Little Wood Reservoir 3 miles above station began Feb. 12, 1941.

Cooperation.- Gage-height record during irrigation season furnished by watermaster for Upper Little Wood River.

Rating tables, Oct. 1, 1939, to Sept. 30, 1941, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1, 1939, to Jan. 11, 1940	Jan. 12, 1940, to Sept. 30, 1941
2.2 15	1.8 7.0 2.9 91 4.4 505
2.4 28	2.0 11 3.2 148 4.6 580
2.6 48	2.3 22 3.6 243
	2.6 50 4.0 363

## Discharge, in second-feet, 1939-41

1939-40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	35	36	41	*b40	61	a560	a270	b300	76	31	17
2	25	36	36	42	42	62	a480	b277	a290	84	30	17
3	28	36	35	43	40	57	a430	a350	a280	79	29	20
4	28	a36	35	42	38	52	a390	a390	b265	78	27	24
5	25	a36	34	41	40	58	b383	a330	b265	72	24	30
6	25	a36	34	38	42	51	a330	a300	b227	69	23	28
7	26	a36	34	36	40	54	a300	a270	b212	69	23	26
8	26	36	35	*38	38	69	a280	a290	a190	66	22	33
9	26	36	36	42	41	75	a270	a300	a180	66	21	39
10	26	35	39	40	43	70	a260	b363	a180	65	20	43
11	28	34	39	32	38	61	a250	a420	191	65	20	37
12	27	34	36		32	54	b238	a530	205	63	20	34
13	27	35	36		35	a55	a330	a530	225	60	19	39
14	28	35	36		46	a60	a430	a480	225	58	18	41
15	28	35	38		44	a60	b512	b454	212	58	20	38
16	28	34	41	b35	34	a65	a400	a430	198	60	24	36
17	29	34	41		44	a70	b350	b404	184	58	24	34
18	29	32	36		43	a80	a380	a380	170	50	24	34
19	28	32	33		35	a85	a450	b357	166	47	23	41
20	28	34	36		32	a95	a480	a350	157	46	22	44
21	28	33	33	b35	39	b105	a450	b337	146	46	22	46
22	30	34	33		48	a120	a400	a335	133	38	20	43
23	32	35	34		48	a140	a380	b337	118	37	18	43
24	32	35	35		44	a170	b357	a350	106	35	17	41
25	32	36	28		46	a250	a350	b357	103	34	17	38
26	32	36	30		48	a350	a360	a350	98	34	18	37
27	33	36	24		58	a600	b377	b337	91	34	18	38
28	33	36	31		70	a420	a340	b319	85	33	18	47
29	34	36	b33		73	a330	b312	b283	80	32	17	62
30	35	36	b36		-	-	a320	a290	b283	79	38	18
31	35	-	b39		-	a520	-	a290	-	37	18	

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records, and records for Big Wood River and Slough at Bailey and Boise River near Twin Springs.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

Discharge, in second-feet, of Little Wood River near Carey, Idaho, 1939-41--Continued

1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a68	63	65	b50	b60	17	238	254	260	142	106	59
2	a70	63	76		b60	17	322	277	233	116	101	184
3	a76	65	69		b35	16	439	280	195	127	78	182
4	a72	63	62		b90	16	380	271	177	135	57	186
5	a68	61	63		14	17	377	268	215	135	57	162
6	a66	60	61	b50	11	17	350	263	233	131	58	138
7	a64	62	55		b100	18	265	233	254	121	66	127
8	62	70	52		150	18	303	179	297	110	68	110
9	61	68			112	18	316	193	303	118	72	105
10	60	61			61	26	344	238	286	163	73	103
11	61	55		b50	57	56	337	251	233	195	82	103
12	58	b45			48	65	306	271	227	205	46	100
13	55	b40			10	82	254	363	238	207	55	101
14	52	b50			8	82	240	411	268	205	73	114
15	49	b50			8	82	207	387	286	207	75	106
16	49	54	(*)	b45	8	79	249	312	291	203	75	106
17	49	57			13	80	265	280	288	200	75	98
18	48	57			13	80	220	274	257	198	68	78
19	46	66			40	80	142	274	235	191	57	63
20	48	f60			b30	84	140	134	249	175	57	61
21	48	a55		b45	15	85	150	309	240	163	55	62
22	49	a50			15	73	172	300	186	160	56	63
23	49	a40			15	73	172	294	207	142	55	62
24	49	a35			16	76	157	294	217	127	43	63
25	54	a25			16	82	156	297	207	121	42	62
26	62	*17		b45	16	91	133	300	179	138	43	61
27	70	26			18	108	150	309	159	133	42	58
28	65	b40			16	118	212	309	157	118	43	62
29	62	40			-	160	246	309	157	106	44	44
30	63	66			-	263	249	306	152	112	44	58
31	65	-			-	260	-	288	-	108	44	-

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of recorded range of stage, weather records, and records for nearby stations.

b Stage-discharge relation affected by ice.

f Fragmentary gage-height record; discharge computed from partly estimated gage height.

Monthly discharge, in second-feet, 1939-41

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October .....	891	35	20	28.7	1,770
November .....	1,050	36	32	35.0	2,080
December .....	1,082	41	24	34.9	2,150
Calendar year 1939 .....	29,422	568	14	80.6	56,360
January .....	1,135	-	-	36.6	2,260
February .....	1,261	73	32	43.5	2,500
March .....	4,619	600	51	149	9,160
April .....	11,119	560	238	371	22,060
May .....	11,043	530	270	356	21,900
June .....	5,361	300	79	179	10,630
July .....	1,687	84	32	54.4	3,360
August .....	665	31	17	21.5	1,320
September .....	1,116	66	17	37.2	2,210
Water year 1939-40 .....	41,029	600	17	112	81,370
October 1940 .....	1,818	76	48	58.6	3,610
November .....	1,564	70	17	52.1	3,100
December .....	1,588	85	-	50.3	3,090
Calendar year 1940 .....	42,946	600	17	117	86,170
January 1941 .....	1,550	-	-	50.0	3,070
February .....	1,029	150	8	36.8	2,040
March .....	2,329	263	16	75.1	4,620
April .....	7,448	439	133	248	14,770
May .....	8,728	411	134	282	17,310
June .....	6,866	303	152	229	15,620
July .....	4,702	207	106	152	9,330
August .....	1,910	106	42	61.6	3,790
September .....	2,661	184	44	95.0	5,660
Water year 1940-41 .....	42,353	439	8	116	84,000

## Little Wood River near Richfield, Idaho

Location.- Water-stage recorder, lat. 43°03', long. 114°08', in sec. 30, T. 4 S., R. 20 E., half a mile upstream from Jim Burn's Slough and heading of Dietrich canal and 1 mile east of railroad station at Richfield.

Records available.- January 1911 to September 1941 (irrigation seasons only).

Extremes.- Maximum discharge recorded, 218 second-feet Apr. 5-7 (gage height, 2.05 feet); minimum recorded, 55 second-feet May 16 (gage height, 1.21 feet).  
1911-41: Maximum discharge recorded, 868 second-feet May 3, 1938 (gage height, 3.97 feet); from rating curve extended above 900 second-feet; minimum recorded, 7.6 second-feet June 24, 25, 1920 (gage height, 0.52 foot).

Remarks.- Records good. Small ranch diversions above gage.

Cooperation.- Gage-height record and results of seven discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	101	117				f122	122	69	105	92	133
2	97	103	117				134	120	73	106	90	131
3	97	a104	-				154	120	75	106	89	134
4	97	104	-				190	118	78	106	89	134
5	97	106	-				218	120	78	106	87	133
6	98	108	-				218	120	80	105	84	131
7	98	110	-				216	112	81	103	84	129
8	98	110	-				f185	97	81	103	87	129
9	98	110	-				176	90	87	h101	93	127
10	97	110	-				190	90	86	97	98	127
11	97	b110	-				f195	93	84	95	105	127
12	97	b111	-				200	89	81	90	113	129
13	97	b111	-				195	90	79	90	110	129
14	97	b112	-				173	87	78	90	115	125
15	97	b112	-				160	72	76	87	117	125
16	97	b113	-				152	58	76	87	124	125
17	97	113	-				160	58	74	87	124	125
18	97	113	-				171	58	74	86	124	127
19	97	115	-				165	64	75	84	124	129
20	97	115	-				140	66	78	84	124	129
21	97	117	-				134	68	80	84	124	131
22	97	117	-				131	66	80	84	127	134
23	98	b117	-				133	66	78	82	129	140
24	97	b117	-				133	65	78	84	129	140
25	98	b117	-				131	64	76	86	129	140
26	100	b117	-				127	66	78	88	129	140
27	100	b117	-				124	66	75	87	133	140
28	100	b117	-				120	66	68	87	133	140
29	101	117	-				122	65	97	87	133	134
30	101	117	-				125	65	101	90	133	133
31	101	-	-			h120	-	68	-	92	133	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							3,034	101	97	97.9	6,020	
November.....							3,365	117	101	112	6,670	
December.....							-	-	-	-	-	
Calendar year.....							-	-	-	-	-	
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							4,792	218	120	160	9,500	
May.....							2,571	122	58	82.9	5,100	
June.....							2,391	101	69	79.7	4,740	
July.....							2,983	106	82	92.4	5,650	
August.....							3,505	133	84	113	6,980	
September.....							3,950	140	125	132	7,830	
Water year.....							-	-	-	-	-	

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

c Computed on basis of partly estimated gage-height record.

d Computed from staff-gage reading.

## Little Wood River at Shoshone, Idaho

Location.- Water-stage recorder, lat. 42°56', long. 114°24', in sec. 2, T. 6 S., R. 17 E., just upstream from diversion dam for town water supply and 400 feet upstream from Shoshone-Richfield highway bridge in Shoshone.

Records available.- April 1922 to September 1941 (irrigation seasons only).

Extremes.- Maximum discharge recorded during year, 451 second-feet Aug. 13 (gage height, 2.50 feet); minimum recorded, 53 second-feet Apr. 21, 22 (gage height, 0.84 foot).

1922-41: Maximum discharge recorded, 664 second-feet June 18, 1922; maximum gage height recorded, 3.85 feet July 4, 1938; practically no flow July 29, 1931, and Oct. 3, 1938.

Remarks.- Records good. Many diversions above and below station for irrigation. Flow affected by operation of Milner-Gooding canal, which diverts from Snake River and crosses Little Wood River above station.

Cooperation.- Gage-height record and results of five discharge measurements furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102						h69	366	371	397	381	387
2	80						h71	382	366	395	381	384
3	a65						h94	374	364	381	385	388
4	a64						a125	366	363	387	387	388
5	64						154	370	359	382	401	394
6	64						190	373	364	379	398	394
7	64						194	378	399	379	406	395
8	84						143	376	422	379	398	398
9	a64						86	373	427	379	397	401
10	a64						88	376	403	378	397	361
11	a64						94	373	374	382	402	294
12	a64						99	370	363	391	424	300
13	h64						99	364	354	388	436	300
14	-						91	369	345	384	418	297
15	-						78	357	340	382	408	278
16	-						69	355	345	381	404	271
17	-						66	354	355	382	404	274
18	-						76	359	350	376	413	255
19	-						76	364	343	371	410	238
20	-						73	366	336	373	398	238
21	-						59	368	336	370	384	238
22	-						141	363	333	368	381	242
23	-						274	359	338	371	381	251
24	-						336	355	340	373	381	259
25	-						361	352	340	376	384	255
26	-						364	357	361	376	385	251
27	-						394	361	374	378	385	242
28	-						407	363	378	376	382	234
29	-						387	368	390	376	378	234
30	-						376	364	395	376	374	157
31	-						-	366	-	378	382	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October 1-13.....							887	102	64	68.2	1,760	
November.....							-	-	-	-	-	
December.....							-	-	-	-	-	
Calendar year .....							-	-	-	-	-	
January.....							-	-	-	-	-	
February.....							-	-	-	-	-	
March.....							-	-	-	-	-	
April.....							5,134	407	59	171	10,180	
May.....							11,331	382	352	366	29,470	
June.....							10,928	427	333	364	21,680	
July.....							11,763	397	368	379	25,530	
August.....							12,246	436	374	395	24,290	
September.....							8,998	401	157	300	17,850	
Water year 1940-41.....							-	-	-	-	-	

a No gage-height record; discharge interpolated on basis of information furnished by watermaster.  
 h Computed from staff-gage readings.

## Silver Creek near Picabo, Idaho

Location.- Water-stage recorder, lat. 43°17', long. 114°01', in sec. 1, T. 2 S., R. 20 E., 1½ miles downstream from drain ditch of Blaine County Drainage District No. 1 and 3 miles southeast of Picabo.

Records available.- May 1920 to September 1941 (1922-35, irrigation seasons only).

Extremes.- Maximum discharge during year, 181 second-feet Aug. 14; maximum gage height, 3.20 feet Jan. 6, affected by ice; minimum discharge, 82 second-feet May 15-17 (gage height, 1.20 feet).

1920-41: Maximum discharge, 312 second-feet Apr. 3, 1923; maximum gage height, 3.41 feet Apr. 15, 1936; minimum discharge, 26 second-feet June 2, 1920 (gage height, 0.48 foot).

Remarks.- Records good. Many diversions above station for irrigation. Records of discharge do not include water bypassed at times around station by slough on right bank from which there is some diversion for irrigation.

Cooperation.- Gage-height record furnished by watermaster for Big Wood and Little Wood Rivers.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		134	132	110	121	131	129	106	107	161	141	162
2		135	132	b110	115	141	135	101	107	166	138	162
3		136	131	b115	114	142	148	96	107	153	136	162
4		136	132	b115	114	142	150	99	109	151	133	161
5	a132	136	132	b115	114	146	142	98	111	141	132	161
6		135	132	b115	114	152	142	97	104	141	132	161
7		137	131	b115	116	154	136	101	110	148	132	160
8		141	129	b115	115	154	127	110	124	146	131	159
9	h133	147	127	b115	114	155	122	113	129	143	132	160
10	a132	137	128	115	115	157	125	114	127	138	132	159
11	132	132	b125	115	116	157	136	111	121	134	138	158
12	132	131	b120	115	116	152	140	109	117	132	151	159
13	132	132	b120	114	115	147	131	114	116	134	170	159
14	132	130	b110	117	114	142	124	102	117	135	179	159
15	131	128	b100	117	114	139	122	88	119	133	174	159
16	129	127	*b105	116	114	138	121	84	116	130	165	158
17	128	127	b110	123	113	142	124	84	114	132	161	157
18	129	130	b110	118	114	157	130	90	116	133	162	157
19	129	131	b110	*117	114	173	129	94	124	134	155	157
20	127	134	b120	117	114	178	125	95	127	134	157	157
21	127	134	121	116	114	176	124	96	127	134	167	159
22	127	134	129	117	116	177	120	96	129	134	168	162
23	128	133	121	117	116	171	118	94	128	132	168	166
24	129	131	126	117	119	160	118	94	125	129	168	167
25	131	130	123	117	123	151	120	96	124	128	168	171
26	133	128	120	120	120	144	119	97	123	130	168	168
27	135	128	123	116	120	139	116	99	124	133	168	164
28	137	*128	124	116	123	133	115	99	133	136	168	156
29	136	129	122	120	-	127	109	98	149	142	167	154
30	134	130	124	116	-	127	107	99	163	145	166	154
31	134	-	122	119	-	131	-	104	-	144	165	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,073	137	127	131	8,080		
November.....						3,981	147	127	135	7,900		
December.....						3,781	132	100	122	7,500		
Calendar year 1940.....						44,438	187	66	121	88,140		
January.....						3,600	123	110	116	7,140		
February.....						3,247	123	113	116	6,440		
March.....						4,655	173	127	150	9,190		
April.....						3,804	150	107	127	7,550		
May.....						3,078	114	84	99.3	6,110		
June.....						3,646	163	104	122	7,230		
July.....						4,296	161	128	139	8,520		
August.....						4,763	179	131	155	9,510		
September.....						4,808	171	154	160	9,540		
Water year 1940-41.....						47,742	179	84	131	94,710		

\* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

c Computed from staff-gage reading.

Note.- The flow in bypass channel, which carries water around gage, was measured as 12.0 second-feet Oct. 9, 18.3 second-feet July 3, 6.05 second-feet Aug. 7, 25.1 second-feet Sept. 12, or estimated as 3 second-feet Nov. 28, 10 second-feet Dec. 16, 12 second-feet Jan. 19, 25 second-feet Mar. 6, 32 second-feet Apr. 7, 0.05 second-foot May 25.

## BIG WOOD RIVER BASIN

King Hill canal near Hagerman, Idaho

Location.- Staff gage, lat. 42°52', long. 114°55', in SW $\frac{1}{4}$  sec. 27, T. 6 S., R. 13 E., 430 feet upstream from mouth of inverted syphon crossing Snake River, 1,000 feet downstream from heading at Idaho Power Co.'s canal, half a mile west of highway bridge over Big Wood River, and  $3\frac{1}{2}$  miles north of Hagerman.

Records available.- March 1930 to September 1941 (irrigation seasons only except for 1939).

Extremes.- Maximum discharge observed during year, 312 second-feet May 21, 26, 29 (gage height, 3.56 feet); no flow for periods during winter and Mar. 28, July 7, 30, 31, Aug. 25, when gates were closed.  
1930-41: Maximum discharge observed, 327 second-feet May 28, 29, 1940; maximum gage height, 3.64 feet July 3, 4, 1931, Aug. 13 to Sept. 4, 1935, Aug. 11-14, Aug. 16 to Sept. 1, 1936; practically no flow for long periods each year.

Remarks.- Records good. Gage read twice daily. This canal, which is operated by King Hill Irrigation District to provide water for irrigation of its project, diverts from Idaho Power Co.'s canal, which in turn diverts from Big Wood River (Malad Springs water).

Cooperation.- Gage readings furnished by King Hill Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	3				-	145	295	303	288	296	283
2	196	-				-	165	295	300	288	293	283
3	196	-				-	168	298	296	291	290	283
4	196	-				-	172	298	288	291	291	279
5	189	-				-	176	300	284	291	293	278
6	185	-				-	204	298	284	286	295	279
7	185	-				0	203	298	288	116	296	278
8	185	-				0	213	298	288	284	295	273
9	185	-				69	236	298	284	295	295	268
10	185	-				74	236	298	286	295	295	266
11	185	-				93	233	296	279	295	293	267
12	165	-				93	235	296	279	295	293	265
13	3	-				93	236	303	288	295	293	262
14	a3	-			†2	92	255	305	286	298	295	262
15	a3	-				91	255	306	278	300	291	260
16	a3	-	e3			91	255	308	288	300	288	257
17	a3	-				91	255	308	288	295	290	251
18	a3	-				91	254	308	286	296	291	249
19	a4	-				91	252	308	288	296	290	247
20	a4	-				91	254	308	286	295	286	244
21	a4	-				91	263	310	286	295	288	244
22	a4	-				48	268	310	288	296	290	243
23	a4	-				5	275	308	288	296	288	241
24	4	-				5	284	310	286	296	286	243
25	a4	-				5	296	308	290	298	184	241
26	a4	-				5	296	312	291	298	284	239
27	a4	-				30	293	312	290	295	284	238
28	a4	7				57	295	310	290	291	284	235
29	a3	-				106	295	312	290	289	284	233
30	a3	-				122	293	301	290	296	284	238
31	a3	-				127	-	301	-	73	281	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2,315	196	3	74.7	4,590		
November.....						-	-	-	-	-		
December.....						-	-	-	-	-		
Calendar year .....						-	-	-	-	-		
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March 7-31.....						1,661	127	0	66.4	3,290		
April.....						7,264	296	145	242	14,410		
May.....						9,416	312	295	304	18,680		
June.....						8,636	303	278	288	17,150		
July.....						8,628	300	73	276	17,110		
August.....						6,888	296	184	287	17,630		
September.....						7,751	283	233	268	15,330		
Water year .....						-	-	-	-	-		

† Result of discharge measurement.

a No gage-height record; discharge interpolated.

e Field estimate.



## Clover Creek near Bliss, Idaho

Location.- Staff gage, lat. 42°59', long. 115°01', in SW $\frac{1}{4}$  sec. 15, T. 5 S., R. 12 E., just upstream from flow line of Saunders Reservoir,  $\frac{3}{4}$  miles upstream from Hog Creek, and 5 miles northwest of Bliss.

Records available.- April 1938 to September 1941.

Extremes.- Maximum discharge during year, 194 second-feet Feb. 12 (gage height, 3.25 feet from floodmarks); minimum discharge observed, 0.1 second-foot July 3-6, 9-11; minimum gage height observed, 0.83 foot July 10.  
1938-41: Maximum discharge observed, 1,320 second-feet Feb. 28, 1940 (gage height, 6.20 feet); no flow for many days during summers of 1938-40.

Remarks.- Records good except those for periods of ice effect, no gage-height record, or backwater from Saunders Reservoir, which are poor. Many diversions both above and below station for irrigation. Gage read twice daily.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	3.4	5.1		13	135	22	3	5.5	0.3	2.1	1.2
2	2.4	3.2	5.1		13	120	17	c2.5	5.0	.3	1.9	1.2
3	3.2	3.3	a5.1		11	100	22	c2.5	4.4	.2	1.7	1.3
4	2.5	3.3	5.1		12	70		c3.4	4.4	.1	1.5	1.2
5	2.0	3.2	5.1		14	74		c4.4	4.4	.1	1.4	1.5
6												
7	2.0	3.2	5.1		27	57		c4.0	4.6	.1	1.6	1.4
8	2.2	3.6	5.1	a6.0	169	63		c3.5	4.8	1.2	1.4	1.5
9	2.2	3.6	5.1		94	80	c20	c5.0	5.1	.2	1.4	1.4
10	2.2	3.6	b4.5		84	85		5.8	5.1	.1	1.5	1.1
11	2.2	3.6	b4.5		75	69		5.5	4.8	.1	1.5	1.5
12												
13	2.4	4.2			169	69		5.5	4.8	.1	2.3	1.4
14	2.4	4.1			185	46	c11	5.5	5.0	.5	3.0	1.7
15	2.4	3.7			76	29	c9	6.5	4.6	.7	2.8	1.8
16	2.5	b3.5	a3.5		36	25	c8	6.2	4.6	.6	2.7	1.9
17	2.2	b5.5		c12	35	25	c8	6.8	4.6	.3	2.1	1.9
18												
19	2.2	b4.2		9.0	25	31	c7	5.8	4.1	.1	1.5	1.9
20	2.2	4.4	a4.4	8.4	23	72	c7	6.0	3.4	.3	.7	1.8
21	2.8	5.3		8.4	25	48	c6	6.0	2.8	.5	.6	1.9
22	2.9	5.1		7.5	20	34	c6	5.8	2.2	2.9	.3	2.1
23	2.9	4.8		7.5	40	32	c5.5	3.4	1.8	2.5	.5	2.1
24												
25	2.7			8.0	27	41	c5.5	1.3	1.7	1.1	.3	2.2
26	2.7			8.0	41	40	c5.5	1.1	.3	.6	.6	2.2
27	2.4			7.8	36	36	c5	1.1	.2	.7	.7	2.5
28	2.7	a4.0	a7.0	9.0	140	25	c5	1.6	.3	.7	.7	2.3
29	2.9			9.8	106	24	c4.5	2.4	.7	.6	.8	2.5
30												
31	3.2			45	73	21	c4	2.7	.4	.7	.9	2.4
2	3.2	4.6		38	61	20	c4	4.2	.3	.5	.8	2.5
3	3.0	5.0		26	50	17	c3.5	3.0	.9	.6	.8	2.3
4	3.3	5.1		20	-	20	c5.5	2.8	.8	.7	1.0	2.4
5	3.4	5.1		17	-	20	c5	3.0	.7	.7	1.1	2.4
6	3.7	-		14	-	17	-	4.6	-	1.3	1.2	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					81.2	3.7	2.0	2.64	161			
November.....					120.6	-	-	4.02	239			
December.....					173.5	-	-	5.60	344			
Calendar year 1940.....					9,746.9	1,200	0	26.6	19,540			
January.....					339.4	45	-	10.9	673			
February.....					1,684	186	11	60.1	3,540			
March.....					1,534	133	17	49.5	3,040			
April.....					532.0	-	3	11.1	859			
May.....					124.9	5.8	1.1	4.05	248			
June.....					92.3	5.5	.2	3.08	183			
July.....					19.6	2.9	.1	.63	39			
August.....					41.1	3.0	.3	1.33	82			
September.....					55.3	2.5	1.2	1.84	110			
Water year 1940-41.....					4,597.9	185	.1	12.6	9,120			

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records.

b Stage-discharge relation affected by ice.

c Backwater from reservoir; discharge computed on basis of three discharge measurements and weather records.

## King Hill Creek near King Hill, Idaho

Location.- Staff gage, lat.  $43^{\circ}01'$ , long.  $115^{\circ}14'$ , in SW $\frac{1}{4}$  sec. 2, T. 5 S., R. 10 E., at road bridge on Worth Montgomery Ranch,  $\frac{1}{2}$  miles upstream from mouth and  $\frac{1}{2}$  miles northwest of King Hill.

Drainage area.- 83.6 square miles.

Records available.- April 1938 to June 1941 (discontinued). February to May 1913 at site  $\frac{1}{2}$  miles upstream.

Extremes.- Maximum discharge observed during year, 214 second-feet Feb. 7 (gage height, 3.08 feet); no flow Oct. 12, 13, 15.

1913, 1938-41: Maximum discharge observed, 763 second-feet Mar. 31, 1940 (gage height about 7.2 feet), from rating curve extended above 350 second-feet; no flow Oct. 12, 13, 15, 1940.

Remarks.- Records poor. Several diversions above station for irrigation. Gage read twice daily.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5		1.1	1.2	4.8	48	34	14	2.6			
2	.5		1.1	1.2	6.2	38	45	8.0	2.6			
3	.4		1.1	1.2	8.0	31	45	8.4	2.6			
4	.4		1.1	2.4	7.1	30	51	8.6	2.4			
5	.6		1.2	3.0	6.2	28	51	8.0	2.4			
6			1.2	2.3	7.3	29	38	7.3	2.6			
7	.9		1.3	3.5	137	29	38	7.1	2.8			
8	.6		1.2	3.7	38	30	48	7.5	2.6			
9	.4		1.4	3.4	18	33	45	7.7	2.4			
10	.3		1.2	3.1	21	29	40	7.3	2.4			
11	.3		b1.1	2.8	51	26	42	4.6	2.6			
12	.1		b1.1	2.8	52	24	59	4.5	2.4			
13	0		b1.1	2.8	20	24	45	4.3	2.2			
14	.1		b1.1	3.6	16	22	42	4.3	2.2			
15	.1		b1.1	6.2	16	21	38	4.2	2.2			
16		c1.8	b1.1	6.2	14	24	32	4.3	2.2			
17	1.0		1.7	6.2	13	24	28	4.5				
18	1.2		2.3	6.0	12	24	26	4.2				
19	1.3		2.3	5.0	15	24	25	4.3				
20	1.3			5.1	20	23	24	4.0				
21	1.5			5.0	23	21	24	4.0				
22	1.3			5.1	31	21	21	4.2				
23	1.4			5.6	41	21	20	4.2				
24	1.3			5.4	62	20	18	3.1				
25	1.5			5.6	36	19	18	2.0				
26				5.6	26	18	17	2.5				
27				12	21	18	17	3.1				
28				5.6	25	23	17	3.0				
29		c2.5		4.5	-	29	16	2.7				
30				4.5	-	40	15	2.7				
31				4.6	-	32	-	2.8				
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						32.1	-	0	1.04	64		
November.....						54.0	-	-	1.80	107		
December.....						66.8	-	1.1	2.15	132		
Calendar year 1940.....						7,208.7	358	0	19.7	14,300		
January.....						155.2	12	1.2	4.36	268		
February.....						747.6	137	4.8	26.7	1,480		
March.....						823	48	18	26.6	1,630		
April.....						979	59	15	32.6	1,940		
May.....						161.4	14	2.0	5.21	320		
June.....						59.5	2.8	-	1.98	118		
July.....						-	-	-	-	-		
August.....						-	-	-	-	-		
September.....						-	-	-	-	-		
The period.....						-	-	-	-	6,060		

b Stage-discharge relation affected by ice.

c Backwater from beaver dams; discharge computed on basis of weather records and records for Clover Creek near Bliss.

d Doubtful gage-height record; discharge computed on basis of weather records and one discharge measurement.

## Little Canyon Creek near Glenns Ferry, Idaho

Location.- Staff gage, lat. 42°59', long. 115°19', sec. 18, T. 5 S., R. 10 E., at bridge on county road, 2 miles north of Glenns Ferry.

Records available.- December 1938 to September 1941 (October 1940 to September 1941, fragmentary). November 1909 to June 1913 (fragmentary) at site downstream in sec. 30, at Glenns Ferry.

Extremes.- Maximum discharge observed during year, 68 second-feet Feb. 7 (gage height, 3.56 feet); no flow probably occurred at times.  
1939-41: Maximum discharge observed, 150 second-feet Feb. 28, 1940 (gage height, 4.36 feet); no flow at times during summers.

Remarks.- Records fair. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-		2.0	-			-		-	
2			-		2.0	-		†10	-		-	
3			†0.9		2.2	-		†14	†2.4		-	
4			-		2.2	-		-	-		-	
5			-		2.3	†8.7		-	-		-	
6			-		6.7	-		-	-		-	
7			-	d1.3	68	-		-	-		-	
8			-		22	-		-	-		-	
9			-		12	-		-	-		-	
10			-		14	-		-	-		-	
11			-		12	-		-	-		-	
12			-		26	-	†4.5	-	-		-	
13			-		16	-		-	-		-	
14			-	2.2	9.2	-		†9.7	-		-	
15			-	3.4	11	-		-	-		1.8	
16			-	2.9		-		-	-		-	
17			-	1.7		-		-	-		-	
18			†.3	1.5		-		-	-		-	
19			-	1.8		-		-	-		-	0.2
20			-	1.5		-		-	-		-	
21			-	1.7		-		-	-		-	
22			-	1.9		-		-	-		-	
23			-	2.2		-		-	-		-	
24			-	2.0		-		-	-		-	
25	†0.1		-	2.3		-		†1.5	-		-	
26			-	2.6		-		-	-		-	
27			-	2.9		-		-	-		†.3	
28			-	2.9		†2.3		-	-		-	
29			-	2.8		-		-	†2.2	†0.3	-	
30			-	2.5		-		-	-		-	
31			-	2.2		-		-	-		-	
Month				Second-foot-days		Maximum	Minimum	Mean	Run-off in acre-feet			
October.....												
November.....												
December.....												
Calendar year .....												
January.....				57.9		3.4	-	1.87	115			
February.....				337.6		68	2.0	12.1	670			
March.....												
April.....												
May.....												
June.....												
July.....												
August.....												
September.....												
Water year .....												

† Result of discharge measurement.

d Doubtful gage-height record; discharge computed on basis of discharge measurement on Feb. 25, weather records, and records for nearby stations.

## Bennett Creek near Bennett, Idaho

Location.- Water-stage recorder, lat. 43°13'30", long. 115°31'30", in sec. 28, T. 2 S., R. 8 E., 100 yards downstream from East Fork of Bennett Creek and 7½ miles southwest of Bennett post office (Dixie store).

Drainage area.- 21.3 square miles.

Records available.- May 1938 to September 1941.

Extremes.- Maximum discharge during year, 24 second-feet Mar. 1 (gage height, 2.83 feet); practically no flow July 22-27.

1938-41: Maximum discharge, 95 second-feet Mar. 24, 1939 (gage height, 4.71 feet, present datum), from rating curve extended above 60 second-feet; practically no flow Sept. 16-25, Oct. 14-18, 1939, July 22-27, 1941.

Remarks.- Records fair except those for Dec. 12 to Jan. 8, which are poor. No regulation or diversion above station; many diversions for irrigation below.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.2	0.4		2.1	19.0	5.2	5.6	3.5	1.5	0.1	0.1
2	.2	.2	.4		2.0	14.0	5.5	5.9	3.1	1.3	.1	.1
3	.2	.2	.4		2.0	11.0	5.7	7.3	3.1	1.2	.1	.1
4	.2	.2	.4		1.9	9.5	5.6	7.1	3.1	1.2	.1	.2
5	.1	.2	.4	b1.0	2.0	9.0	6.6	7.3	2.9	1.2	.1	.2
6	.1	.2	.4		2.8	8.6	6.5	7.3	3.0	1.0	.1	.2
7	.1	.3	.4		6.2	7.9	6.3	6.9	4.6	.9	.1	.2
8	.1	.4	.5		4.1	7.6	6.3	7.4	4.8	.8	.1	.2
9	.1	.5	.5	1.2	3.7	7.4	6.3	7.1	4.0	.8	.1	.2
10	.1	.5	.4	1.2	4.2	7.3	8.1	6.8	3.5	.6	.1	.2
11	.1	.5	.4	1.2	8.1	7.1	9.0	6.8	3.0	.5	.1	.2
12	.1	.4		1.2	8.8	6.6	9.0	6.8	2.9	.5	.1	.2
13	.1	.4		1.2	5.9	6.3	8.8	6.8	2.6	.3	.1	.2
14	.1	.4		1.9	5.3	5.7	8.3	6.9	2.3	.3	.1	.2
15	.1	.4	b.3	1.8	4.9	5.7	8.1	6.6	2.2	.3	.1	.2
16	.1	.3		1.6	4.5	5.6	7.7	6.2	2.2	.3	.1	.3
17	.1	.4		1.6	4.4	5.7	7.4	6.0	2.1	.1	.1	.3
18	.1	.4		1.5	4.2	5.9	7.1	5.7	2.2	.1	.1	.3
19	.1	.4	.3	1.5	4.2	5.7	6.8	5.6	2.2	.1	.1	.3
20	.2	.4	.4	1.6	4.5	5.9	6.5	5.3	2.1	.1	.1	.3
21	.2	.4	.4	1.5	5.3	5.5	6.2	5.3	1.9	.1	.1	.4
22	.2	.4	.5	1.6	7.1	5.3	5.9	5.0	1.9	0	.1	.4
23	.3	.4	.7	1.6	7.7	5.2	5.6	4.6	1.8	0	.1	.2
24	.2	.3	2.2	1.6	9.9	4.9	5.3	4.4	1.9	0	.1	.2
25	.2	.3	1.8	1.8	8.8	4.8	5.3	4.1	1.9	0	.1	.2
26	.2	.3	1.5	3.0	7.4	4.4	5.6	4.2	1.7	0	.1	.2
27	.2	.3	2.0	2.8	7.3	4.4	5.2	4.2	1.6	0	.1	.2
28	.3	.3	2.1	2.5	10	4.5	5.2	3.9	1.7	.1	.1	.2
29	.3	.3	2.0	2.3	-	4.8	5.3	3.6	1.7	.1	.1	.2
30	.3	.4	2.1	2.2	-	4.9	5.3	3.4	1.5	.1	.1	.3
31	.3	-	1.8	2.2	-	5.0	-	3.5	-	.1	.1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	5.1	0.3	0.1	0.16	0.0075	0.009	10
November.....	10.3	.5	.2	.34	.015	.02	20
December.....	24.5	2.2	-	.79	.037	.04	49
Calendar year 1940.....	2,136.3	55	.1	5.84	.274	3.728	4,240
January.....	48.7	3.0	-	1.57	.074	.09	97
February.....	149.3	10	1.9	5.33	.260	.26	296
March.....	216.2	19	4.4	6.94	.326	.36	427
April.....	195.6	9.0	5.2	6.59	.306	.34	398
May.....	177.6	7.4	3.4	5.73	.269	.31	352
June.....	77.0	4.8	1.5	2.57	.121	.14	153
July.....	13.6	1.5	0	.44	.021	.02	27
August.....	3.1	.1	.1	.10	.0047	.005	6.1
September.....	6.7	.4	.1	.22	.0010	.001	13
Water year 1940-41.....	926.7	19	0	2.54	.119	1.615	1,840

b Stage-discharge relation affected by ice.

## Mountain Home feeder canal near Mountain Home, Idaho

**Location.**- Water-stage recorder and concrete control, lat. 43°13', long. 115°42', in sec. 36, T. 2 S., R. 6 E., 30 feet downstream from point of diversion from Canyon Creek and 5 miles north of Mountain Home.

**Records available.**- April 1924 to September 1929, April 1931 to September 1941.

**Extremes.**- Maximum discharge during year, 95 second-feet May 14 (gage height, 1.37 feet); practically no flow Oct. 13 to Nov. 4.  
1924-29, 1931-41: Maximum discharge, 226 second-feet Feb. 21, 1927 (gage height, 2.18 feet, datum then in use), from rating curve extended above 120 second-feet; no flow for long periods in each year.

**Remarks.**- Records good. Canal diverts from Canyon Creek in sec. 36, T. 2 S., R. 6 E., and delivers water to Mountain Home cooperative canal, which heads in Mountain Home feeder canal half a mile below station, for irrigation of about 5,000 acres in Mountain Home irrigation district. At times when there is a surplus of water for irrigation, canal feeds directly into Mountain Home Reservoir. No diversion from canal above station; three small diversions between station and headgates of Mountain Home cooperative canal. Flow regulated by headgates on Canyon Creek and by Long Tom and Little Camas Reservoirs.

**Cooperation.**- Gage-height record furnished by Mountain Home Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3	0		-	a7	31	13	51	44	68	38	1
2	4	0		-	8	33	14	53	45	68	40	1
3	4	0		-	7	31	14	58	45	67	43	1
4	4	0		-	7	29	14	57	45	68	43	1
5	3	1		-	7	26	16	38	45	65	54	1
6	3	1		-	7	26	14	37	45	49	56	1
7	3	1		-	17	24	13	45	52	46	58	1
8	3	1		-	15	20	12	55	58	59	60	
9	3	1		-	15	24	15	54	57	52	58	
10	3	-		-	16	24	21	54	55	59	29	
11	3	-		-	24	23	28	73	53	73	15	
12	3	-		-	28	22	34	78	52	75	8	
13	0	-		4	25	20	34	89	50	69	23	
14	0	-		5	23	19	33	92	49	51	24	
15	0	-		5	22	18	31	92	48	50	11	
16	0	-		4	20	17	30	88	33	48	4	
17	0	-		5	a17	17	29	83	29	58	3	
18	0	-		5	a16	18	28	94	29	46	3	
19	0	-	h3	5	a16	17	27	33	32	43	3	
20	0	-		5	17	17	25	82	26	43	3	a1
21	0	-		5	19	16	a23	81	24	49	4	
22	0	-		5	20	16	a22	81	30	54	3	
23	0	-		4	23	15	20	80	43	58	3	
24	0	-		5	32	14	20	79	52	59	2	
25	0	-		5	35	14	19	80	63	54	1	
26	0	-		7	28	14	18	84	66	52	1	
27	0	-		7	26	13	18	69	67	51	1	
28	0	-		a6	25	13	18	38	69	48	1	
29	0	h2		a5	-	14	17	31	69	40	1	
30	0	-		a5	-	14	40	37	69	34	1	
31	0	-		a5	-	13	-	39	-	30	1	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	39	4	0	1.3	77
November 1-9.....	5	1	0	.5	9.9
December.....	-	-	-	-	-
Calendar year.....	-	-	-	-	-
January 13-31.....	97	7	4	5.1	192
February.....	520	33	7	18.6	1,030
March.....	612	33	13	19.7	1,210
April.....	660	40	12	22.0	1,310
May.....	2,045	92	31	66.0	4,060
June.....	1,444	69	24	48.1	2,860
July.....	1,673	75	30	54.0	3,320
August.....	593	60	1	19.1	1,190
September.....	30	-	-	1.0	60
Water year.....	-	-	-	-	-

a No gage-height record; discharge computed on basis of recorded range of stage, weather records, and records for nearby stations.

h Computed from staff-gage readings.

## Mountain Home cooperative canal near Mountain Home, Idaho

Location.- Water-stage recorder and concrete control, lat. 43°12', long. 115°42', in sec. 36, T. 2 S., R. 6 E., at Lamberton weir, 300 feet downstream from point of diversion from Mountain Home feeder canal and 4½ miles north of Mountain Home.

Records available.- April 1924 to September 1929, April 1931 to September 1941.

Extremes.- Maximum discharge during year, 89 second-feet May 15 (gage height, 1.45 feet); no flow for long periods during year.

1924-29, 1931-41: Maximum discharge, 109 second-feet July 16, 1925 (gage height, 1.69 feet, datum then in use); no flow during nonirrigation seasons except occasional stock-water runs.

Remarks.- Records good during irrigation season; others poor. No diversions between station and head of canal. Flow regulated by gates at head of canal and by Long Ton and Little Camas Reservoirs. Canal diverts from Mountain Home feeder canal. Water is used for irrigation of about 5,000 acres in Mountain Home irrigation district.

Cooperation.- Gage-height record furnished by Mountain Home Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	46	42	65	37	
2							0	47	43	65	40	
3							0	37	43	65	43	
4							0	31	43	64	43	
5							0	30	44	63	47	
6							0	31	44	47	54	
7							0	39	18	43	55	
8							0	49	10	56	60	
9							0	49	10	31	57	
10							0	48	9	56	28	
11							0	65	9	72	12	
12							0	68	12	73	5	
13			0				0	81	20	69	19	
14							0	86	25	61	21	
15							0	87	25	50	6	
16							0	86	24	47	0	
17							0	83	27	58	0	
18							0	84	28	47	0	
19							0	83	32	42	0	
20							0	81	26	43	0	
21							al	79	23	47	0	
22							al	80	29	53	0	
23							al	79	43	58	0	
24							al	79	52	58	0	
25							al	79	61	53	0	
26							al	84	64	51	0	
27							al	87	65	50	0	
28			e2				1	36	65	47	0	
29							1	28	66	40	0	
30							30	36	66	33	0	
31			-				-	37	-	29	0	
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							0	0	0	0	0	
November.....							10	0	-	.3	20	
December.....							0	0	0	0	0	
Calendar year 1940.....							7,512	87	0	20.5	14,910	
January.....							0	0	0	0	0	
February.....							0	0	0	0	0	
March.....							0	0	0	0	0	
April.....							39	30	0	1.3	77	
May.....							1,895	87	28	61.1	3,760	
June.....							1,068	66	9	35.6	2,120	
July.....							1,636	73	29	52.8	3,240	
August.....							527	60	0	17.0	1,050	
September.....							0	0	0	0	0	
Water year 1940-41.....							5,175	87	0	14.2	10,270	

a No gage-height record; discharge interpolated.

e Discharge computed on basis of discharge measurement, November 29, and information furnished by watermaster.

## Wickahoney Creek near Bruneau, Idaho

Location.- Water-stage recorder, lat. 42°47', long. 115°59', in sec. 27, T. 7 S., R. 4 E., 0.3 mile upstream from mouth and 11 miles southwest of Bruneau.

Records available.- December 1938 to September 1941.

Extremes.- Maximum discharge during year, 62 second-feet Mar. 3 (gage height, 2.13 feet); no flow during most of year.  
1939-41: Maximum discharge recorded, 500 second-feet Mar. 20, 1939 (gage height, 4.30 feet); no flow during long periods of each year.

Remarks.- Records good. No regulation.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	5.8	1.1					
2					0	25	.4					
3					0	61	0					
4					0	38	2.2					
5					0	21	3.0					
6					0	9.6	7.4					
7					0	7.4	3.0					
8					0	11	1.1					
9					0	17	.3					
10					0	19	.4					
11					0	9.6	.2					
12					0	8.2	.3					
13					0	5.0	0					
14					0	2.6	.6					
15					0	1.5	.6					
16					0	1.0	.1					
17					0	2.0	0					
18					0	4.4	.2					
19					0	8.6	.2					
20					0	18	0					
21					0	19	.6					
22					0	12	1.0					
23					0	6.6	3.4					
24					2.6	4.4	4.6					
25					21	2.8	2.8					
26					16	1.7	1.2					
27					7.8	1.1	.4					
28					3.4	1.8	0					
29					-	3.0	0					
30					-	2.6	0					
31					-	1.6	-					
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0		
November.....						0	0	0	0	0		
December.....						0	0	0	0	0		
Calendar year 1940.....						139.0	33	0	.38	276		
January.....						0	0	0	0	0		
February.....						50.8	21	0	1.81	101		
March.....						332.3	61	1.0	10.7	659		
April.....						35.1	7.4	0	1.17	70		
May.....						0	0	0	0	0		
June.....						0	0	0	0	0		
July.....						0	0	0	0	0		
August.....						0	0	0	0	0		
September.....						0	0	0	0	0		
Water year 1940-41.....						418.2	61	0	1.15	830		

## Jacks Creek near Bruneau, Idaho

Location.- Water-stage recorder, lat. 42°47', long. 115°59', in sec. 27, T. 7 S., R. 4 E., 650 feet upstream from confluence with Wickahoney Creek and 11 miles southwest of Bruneau.

Records available.- November 1938 to September 1941.

Extremes.- Maximum discharge during year, 820 second-feet June 13 (gage height, 6.30 feet from floodmark), from rating curve extended above 50 second-feet by logarithmic plotting; no flow during most of year.

1939-41: Maximum discharge, that of June 13, 1941; no flow during most of period.

Remarks.- Records good except those for days of partly estimated gage heights, which are poor. No regulation; ranch diversions above station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7				0	6.0	0	0	0	0	0	
2					0	12	0	0	0	0	0	
3					0	7.3	0	0	0	1.5	0	
4					0	8.6	0	0	0	77.0	0	
5					0	6.5	0	0	0	0	0	
6	0				0	4.7	0	0	17	0	0	
7					0	4.1	0	0	23.3	0	0	
8	0				0	4.1	0	0	0	0	0	
9					0	4.7	0	0	0	0	0	
10	0				0	4.7	.4	0	0	0	0	
11	0				0	3.6	.7	0	0	0	.6	
12	0				6.5	1.7	.6	0	0	0	0	
13	0				5.8	1.5	.3	0	26	0	0	
14	0				2.8	.9	.2	0	23.1	0	0	
15	0				1.6	.5	.2	0	0	0	0	
16	0				.9	.4	.2	0	0	0	0	
17	0				.5	.3	.3	0	0	0	0	
18	0				.4	.4	.6	0	0	0	0	
19	0				.5	.3	.3	0	0	0	0	
20	0				2.6	.7	.2	0	0	0	0	
21	0				7.3	4	.1	0	0	0	0	
22	0				15	0	.1	0	0	0	0	
23	0				17	0	0	0	0	0	0	
24	0				20	0	0	0	0	0	0	
25	0				8.1	0	0	0	0	0	0	
26	.4				7.3	0	0	.7	0	0	0	
27	0				3.9	0	0	0	0	0	0	
28	0				4.7	0	0	0	0	0	0	
29	0				-	0	0	0	0	0	0	
30	0				-	0	0	0	0	0	0	
31	0				-	0	0	.5	-	0	0	
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1.1	0.7	0	0.04	2.2		
November.....						0	0	0	0	0		
December.....						0	0	0	0	0		
Calendar year 1940.....						27.9	10	0	.08	55.3		
January.....						0	0	0	0	0		
February.....						104.9	20	0	3.75	209		
March.....						73.9	12	0	2.38	147		
April.....						4.1	.7	0	.14	8.1		
May.....						1.2	.7	0	.04	2.4		
June.....						49.4	26	0	1.65	98		
July.....						8.5	7.0	0	.27	17		
August.....						.6	.6	0	.02	1.2		
September.....						0	0	0	0	0		
Water year 1940-41.....						243.7	26	0	.67	484		

f Gage height partly estimated.



## Wild Horse Reservoir near Gold Creek, Nev.

Location.- Reference point on Wild Horse Dam on Owyhee River, lat. 41°41'10", long. 115°51'20", in NE¼ sec. 25, T. 44 N., R. 54 E., 8 miles west of Gold Creek. Datum of gage is 6,109.18 feet above mean sea level (levels by U. S. Indian Irrigation Service).

Drainage area.- 209 square miles.

Records available.- March 1938 to September 1941.

Extremes.- Maximum contents recorded during year, 18,640 acre-feet June 14 (gage height, 71.0 feet); no contents Oct. 1 to Dec. 30.  
1938-41: Reservoir full and flow over spillway May 9-18, 1939; no contents at times during each year.

Remarks.- Reservoir is formed by concrete arch dam; storage began Mar. 18, 1938. Capacity, 32,690 acre-feet between gage height 20.0 feet (sill of outlet gate) and 60.0 feet (spillway crest). No dead storage. Water is used for irrigation on the Duck Valley project.

Cooperation.- Gage-height record and base data for capacity rating furnished by the U. S. Indian Irrigation Service.

Contents, in acre-feet, water year October 1940 to September 1941

Date	Contents	Date	Contents	Date	Contents
Oct.- 25	0	Apr. 25	9,690	July 14	16,370
Nov. 25	0	May 24	17,010	25	14,790
Dec. 19	0	25	17,500	28	14,270
Jan. 27	269	June 14	18,640	Aug. 25	12,890
Feb. 24	488	25	18,000	Sept. 4	11,430
Mar. 27	1,290	July 10	16,520	25	11,610

Note.- Reservoir gates were closed and storage began on Dec. 30.

## Owyhee River near Gold Creek, Nev.

Location.- Water-stage recorder, lat. 41°41'10", long. 115°51'30", in NW¼ sec. 25, T. 44 N., R. 54 E., 500 feet downstream from Wild Horse Dam and 8 miles west of town of Gold Creek. Altitude, 6,130 feet (from topographic map).

Drainage area.- 209 square miles.

Records available.- March 1916 to September 1925, October 1936 to September 1941.

Average discharge.- 12 years (1917-21, 1922-25, 1936-41) 37.4 second-feet.

Extremes - Maximum daily discharge during year, 109 second-feet (regulated) June 24 (gage height, 2.82 feet); practically no flow Dec. 31 to June 3, Sept. 5-30 when reservoir gates were closed.

1916-25, 1936-41: Maximum discharge, 1,810 second-feet May 5, 1922 (gage height, 10.11 feet, site and datum then in use) from rating curve extended above 400 second-feet; practically no flow at times when reservoir gates were closed.

Remarks.- Records good except those for period of ice effect, which are fair. Small diversions above station for irrigation. Flow regulated by Wild Horse Reservoir (see preceding page).

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

0.3	0	1.0	2.5	1.8	23	2.6	83
.6	.3	1.2	5	2.0	34	2.8	106
.8	.9	1.4	9	2.2	47	3.0	132
.9	1.6	1.6	15	2.4	64	3.3	177

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	5	7						0	25	44	36
2	4	5	7						0	21	44	36
3	4	5	7						0	13	46	36
4	4	5	7						13	13	46	15
5	4	5	7						50	13	47	0
6	4	5	7						50	13	47	0
7	4	5	7						50	12	47	0
8	4	5	6						50	11	47	0
9	4	5	6						50	10	58	0
10	4	5	6						50	22	67	0
11	4	5	5						50	32	56	0
12	4	5	4						50	32	26	0
13	4	5	4						50	32	17	0
14	4	4	3						40	40	17	0
15	4	5	3						25	49	17	0
16	4	5	4						25	49	17	0
17	4	5	4						25	49	17	0
18	4	5	4						25	68	18	0
19	4	5	4						25	81	18	0
20	4	5	4						24	81	18	0
21	4	5	5						27	81	17	0
22	4	5	5						44	80	17	0
23	4	5	5						44	88	24	0
24	5	5	6						67	105	36	0
25	5	5	6						109	105	37	0
26	5	5	6						107	94	37	0
27	6	5	6						107	85	36	0
28	5	5	b5						106	69	36	0
29	5	5	b5						98	54	36	0
30	5	5	2						56	44	36	0
31	5	-	0						-	44	36	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	134	6	4	4.3	266
November.....	150	5	4	5.0	298
December.....	158	7	0	5.1	313
Calendar year 1940.....	7,689	166	0	21.0	15,240
January.....	0	0	0	0	0
February.....	0	0	0	0	0
March.....	0	0	0	0	0
April.....	0	0	0	0	0
May.....	0	0	0	0	0
June.....	1,417	109	13	47.2	2,810
July.....	1,518	105	10	49.0	3,010
August.....	1,062	67	17	34.3	2,110
September.....	123	36	15	4.1	244
Water year 1940-41.....	4,562	109	0	12.5	9,060

b Stage-discharge relation affected by ice.

## Owyhee River at Mountain City, Nev.

Location.- Water-stage recorder, lat. 41°50', long. 115°59', in SE¼ sec. 36, T. 46 N., R. 53 E., at Mountain City, 1 mile downstream from California Creek.

Drainage area.- 350 square miles.

Records available.- May to December 1913, November 1926 to September 1941.

Average discharge.- 15 years (1926-41), 85.8 second-feet.

Extremes.- Maximum discharge during year, 375 second-feet (regulated) May 4 (gage height, 3.34 feet); minimum daily, 7 second-feet Oct. 2, but may have been less during period of ice effect.

1913, 1926-41: Maximum discharge, 1,830 second-feet Apr. 20, 1936 (gage height, 7.6 feet), from rating curve extended above 600 second-feet; no flow July 29 to Sept. 15, 1931, July 21 to Sept. 18, 1934.

Remarks.- Records good except those for periods of ice effect, or doubtful or no gage-height record, which are fair. Diversions above station for irrigation. Flow regulated by Wild Horse Reservoir (see p. 123).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	10	14		10	206	132	319	117	82	56	45
2	7	12				156	128	316	108	68	58	45
3	8	14				80	121	349	102	54	55	45
4	8	12				66	114	362	98	47	58	45
5	8	11				58	119	316	128	43	58	21
6	8	11			11	55	108	322	137	27	56	15
7	8	12				55	105	281	173	33	56	12
8	8	12				62	107	292	178	30	74	10
9	9	11				71	119	319	167	27	95	d10
10	9	11				62	135	295	146	26	85	d10
11	9	10		10		12	65	121	285	130	44	d10
12	9	10				14	82	115	309	130	42	d9
13	9	11				16	62	110	309	128	42	d9
14	9	13				18	56	107	288	139	43	d9
15	9	13				20	55	117	243	105	55	b9
16	9	11		12		23	64	115	196	98	56	d9
17	9	10				24	93	108	174	95	56	d9
18	9	9				24	112	107	180	90	62	d10
19	9	9				26	100	102	173	85	85	d10
20	9	9				29	93	96	145	82	85	d11
21	9	9				32	83	96	128	77	85	d11
22	9	9				40	83	105	115	90	85	d11
23	9	9				60	82	a120	112	80	85	d11
24	9	9				106	71	a140	110	100	105	d11
25	9	10				88	74	a160	132	133	110	d11
26	14	12				70	90	a180	161	135	108	d11
27	15	13				52	110	a210	195	141	95	d11
28	12	14				64	123	a240	157	159	93	d11
29	11	16				-	121	a270	137	152	71	d11
30	11	18				-	119	300	133	137	62	d11
31	10	-				-	126	-	132	-	58	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	290	15	7	9.4	575
November.....	340	18	9	11.3	674
December.....	392	-	-	12.6	778
Calendar year 1940.....	21,025	234	1	57.4	46,700
January.....	310	-	-	10	615
February.....	319	106	-	29.2	1,620
March.....	2,715	206	55	37.6	5,390
April.....	4,107	300	98	137	8,150
May.....	6,991	362	110	226	13,870
June.....	3,640	178	77	121	7,220
July.....	1,964	110	26	63.4	3,900
August.....	1,497	95	23	48.3	2,970
September.....	463	45	9	15.4	918
Water year 1940-41.....	23,528	362	7	64.5	46,680

a No gage-height record; discharge computed on basis of records near Owyhee.

d Doubtful gage-height record; discharge interpolated.

h Discharge computed from daily gage reading.

Note.- Stage-discharge relation affected by ice Nov. 13 to Feb. 26.

Owyhee River above China diversion dam, near Owyhee, Nev.

Location.- Water-stage recorder, lat. 41°55', long. 116°05', in NW¼ sec. 6, T. 46 N., R. 53 E., 1,000 feet downstream from Skull Creek, 1 mile upstream from the China diversion dam, and 2½ miles southeast of Owyhee.

Drainage area.- 458 square miles.

Records available.- March 1939 to September 1941.

Extremes (regulated).- Maximum discharge during year, 610 second-feet May 11 (gage height, 5.90 feet); minimum daily, 11 second-feet Oct. 6-11.  
1939-41: Maximum discharge, 1,430 second-feet Mar. 25, 1939 (gage height, 6.76 feet, datum then in use), from rating curve extended above 240 second-feet; minimum daily, 2 second-feet Sept. 15-18, 1940.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation. Flow regulated by Wild Horse Reservoir (see p. 123).

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 8 to Sept. 30)

1.0	4	1.8	35	3.0	148	4.5	355
1.2	8	2.0	49	3.3	184	5.0	440
1.4	16	2.3	74	3.6	223	5.5	532
1.6	24	2.6	103	4.0	278	6.0	630

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	18	26		b14	223	164	440	174	118	52	35
2	12	22	25		b14	256	168	447	161	89	51	36
3	12	23	23		b14	118	159	521	152	76	51	37
4	12	21	20		b14	83	146	547	143	65	51	37
5	12	20			b15	80	154	490	152	60	51	29
6	11	20	b19		b16	72	143	472	185	55	51	19
7	11	20			b16	71	135	460	281	48	50	16
8	11	20			b16	77	134	505	311	45	55	16
9	11	21			b16	88	150	547	274	41	77	15
10	11	20			b18	78	176	526	240	38	71	14
11	11	19			b20	78	170	542	210	45	71	14
12	12	19			b22	77	160	534	201	48	67	15
13	12	20			b24	75	150	505	193	46	43	15
14	11	22			b26	67	148	469	200	46	31	a15
15	12	22			b28	63	158	390	167	51	29	a15
16	12	20	b16		b33	72	160	333	148	55	28	a15
17	13	b19			b34	97	148	299	141	55	29	a15
18	13	b18			b34	137	143	299	134	55	28	a15
19	13	b18			b36	125	141	275	125	73	26	a15
20	13	b18			b40	118	138	240	116	78	26	a15
21	13	b18	b18		b47	101	136	213	110	78	26	a15
22	13	b18			64	102	143	193	104	75	26	a15
23	13	b18			95	101	166	153	103	77	25	a15
24	14	b18			142	85	197	176	95	86	28	a15
25	15	b19			124	86	219	193	130	97	35	a15
26	19	b20			89	101	254	233	150	100	36	a15
27	25	b22			75	125	275	288	158	90	35	a15
28	21	b23			82	152	312	235	178	87	35	a15
29	20	b24			-	155	349	204	178	71	35	15
30	19	26			-	143	396	201	161	60	36	15
31	18	-			-	166	-	197	-	55	36	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						428	25	11	13.8	849		
November.....						606	26	18	20.2	1,200		
December.....						586	26	-	18.9	1,160		
Calendar year 1940.....						28,358	337	-	77.5	56,260		
January.....						496	-	-	16	984		
February.....						1,168	142	14	41.7	2,320		
March.....						3,382	256	63	109	6,710		
April.....						5,492	396	138	183	10,890		
May.....						11,157	547	176	360	22,130		
June.....						5,085	311	95	170	10,090		
July.....						2,066	119	38	66.6	4,100		
August.....						1,290	77	25	41.6	2,560		
September.....						553	37	-	18.4	1,100		
Water year 1940-41.....						32,309	547	-	88.5	64,090		

a No gage-height record; discharge computed on basis of records at Mountain City.  
Note.- Stage-discharge relation affected by ice Nov. 17 to Feb. 21.

## Owyhee River above Owyhee Reservoir, Oreg.

Location.- Water-stage recorder, lat. 43°13', long. 117°30', in SE¼ sec. 18, T. 27 S., R. 43 E., 3 miles upstream from flow line of Owyhee Reservoir and 8 miles southwest of Watson. Altitude of gage, about 2,690 feet above mean sea level (levels by Bureau of Reclamation).

Drainage area.- 10,400 square miles.

Records available.- October 1930 to September 1941 in reports of Geological Survey.

April 1929 to September 1936 in reports of Oregon State engineer.

Average discharge.- 12 years, 746 second-feet.

Extremes.- Maximum discharge during year, 9,560 second-feet Mar. 3 (gage height, 10.68 feet); minimum, 171 second-feet Oct. 17-24 (gage height, 3.84 feet).

1929-41: Maximum discharge, 16,000 second-feet Mar. 20, 1932, Apr. 19, 1936; maximum gage height, 12.95 feet Mar. 20, 1932; minimum discharge, 103 second-feet Aug. 19, 1932 (gage height, 3.57 feet).

Remarks.- Records good except those for period of no gage-height record, which are poor.

Diversions above station for irrigation. Flow slightly regulated by 11 small reservoirs which have a total capacity of 52,000 acre-feet.

Cooperation.- Water-stage recorder inspected and some discharge measurements furnished by Bureau of Reclamation.

Rating tables, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 9				Dec. 10 to Sept. 30			
3.8	161	4.6	417	3.9	195	5.2	720
4.0	215	4.9	554	4.2	282	5.6	970
4.2	275	5.3	750	4.4	350	6.0	1,260
4.4	341			4.6	426	6.5	1,680
				4.9	560	7.0	2,150

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	174	595	254	a240	263	2,440	1,880	1,170	1,240	792	211	206
2	178	644	280	a235	266	4,560	1,710	1,300	1,070	738	214	211
3	178	481	324	a240	260	7,280	1,680	1,640	1,010	682	214	206
4	176	514	320	a245	260	4,080	1,970	1,890	964	603	219	206
5	178	495	354	a255	260	3,140	2,180	2,010	905	605	222	211
6	184	401	324	a255	266	2,740	2,040	2,100	798	545	222	206
7	184	371	324	257	350	2,420	2,650	1,860	750	479	217	203
8	181	341	316	270	1,020	2,290	2,320	1,830	804	438	214	203
9	181	378	306	263	918	2,390	1,350	1,740	991	395	208	200
10	178	504		260	1,640	2,500	1,730	1,700	1,420	361	208	203
11	176	472		257	2,560	2,230	1,740	1,690	1,700	340	206	200
12	176	458		254	3,690	1,950	1,900	1,600	1,530	308	203	203
13	176	390		251	4,300	1,830	2,460	1,510	1,300	269	203	203
14	174	356		273	3,160	1,680	2,220	1,470	1,070	276	200	203
15	174	327		266	2,000	1,450	1,640	1,480	892	270	203	203
16	174	316		273	1,470	1,250	1,690	1,530	798	263	206	203
17	174	313		282	1,230	1,120	1,560	1,520	774	270	242	203
18	174	299		276	1,210	1,320	1,580	1,440	766	251	262	203
19	174	299		285	1,690	2,630	1,270	1,280	756	248	217	203
20	174	327		285	2,020	2,730	1,270	1,160	670	242	222	203
21	171	409		289	2,380	2,230	1,240	1,050	616	234	225	200
22	171	450		298	2,400	1,850	1,200	1,020	575	231	234	198
23	171	363		298	3,380	1,720	1,170	931	580	225	236	200
24	174	313		308	4,660	1,700	1,120	822	525	214	217	200
25	176	267		318	5,840	1,630	1,050	750	475	214	214	200
26	208	261		315	4,720	1,420	991	692	434	214	211	206
27	264	280		308	3,380	1,660	977	626	414	217	208	206
28	267	267		308	2,440	2,210	977	698	462	217	208	206
29	539	254		292	-	2,350	1,010	938	550	228	214	206
30	466	258		276	-	2,200	1,080	1,240	957	219	214	203
31	732	-		282	-	1,910	-	1,300	-	214	211	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				6,897	732	171	222	13,650				
November.....				11,403	644	254	380	22,620				
December.....				7,512	354	-	242	14,900				
Calendar year 1940.....				223,546	6,400	132	611	443,400				
January.....				8,514	313	235	275	16,890				
February.....				58,053	5,840	260	2,073	118,100				
March.....				72,910	7,280	1,120	2,352	144,600				
April.....				48,155	2,650	977	1,605	95,510				
May.....				42,087	2,100	626	1,358	83,480				
June.....				25,816	1,700	414	861	51,210				
July.....				10,890	792	214	351	21,600				
August.....				6,727	232	200	217	13,540				
September.....				6,115	211	198	204	12,130				
Water year 1940-41.....				305,078	7,280	171	836	605,100				

a No gage-height record; discharge computed on basis of records for Owyhee Reservoir at Owyhee Dam.

## OWYHEE RIVER BASIN

Owyhee Reservoir at Owyhee Dam, near Nyssa, Oreg.

Owyhee Reservoir.- Staff gage, lat. 43°38', long. 117°15', in sec. 20, T. 22 S., R. 45 E., at Owyhee Dam, 21 miles southwest of Nyssa. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Drainage area, 11,160 square miles. Records available, October 1932 to September 1941. Maximum contents observed during year, 1,121,800 acre-feet Apr. 1-24 (elevation, 2,670.00 feet); minimum observed, 797,600 acre-feet Oct. 25 (elevation, 2,641.07 feet). Maximum contents observed during period 1932-41, 1,125,000 acre-feet June 11, 1936 (elevation, 2,670.27 feet); minimum observed since full capacity was attained on May 7, 1936, 754,100 acre-feet Oct. 22, 1939 (elevation, 2,636.48 feet).

Reservoir is formed by concrete arch-gravity dam, completed in September 1932; storage began Oct. 16, 1932. Capacity, 1,121,800 acre-feet (revised) between elevations 2,367.5 feet (bottom of sluice gates) and 2,670 feet (top of spillway gate), and 715,000 acre-feet between elevations 2,590.2 feet (diversion tunnel) and 2,670 feet. Dead storage below elevation 2,367.5 feet negligible. Figures given herein are of contents above elevation 2,367.5 feet. The reservoir will generally not be drawn below elevation 2,590.2 feet. Water is released through diversion tunnel to South canal for irrigation of lands west of Snake River in the vicinity of Homedale, Idaho, and to North canal for irrigation of lands north and west of Owyhee River, and through sluice gates to river for Owyhee canal, which diverts about 18 miles downstream. Gage read once daily by employees of Bureau of Reclamation.

Monthly gage height and contents, water year October 1940 to September 1941

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	2,642.16	808,300	-
Oct. 31.....	2,641.71	803,900	-4,400
Nov. 30.....	2,644.09	827,400	+23,500
Dec. 31.....	2,646.68	842,500	+15,100
Calendar year 1940...	-	-	+61,900
Jan. 31.....	2,647.29	860,000	+17,500
Feb. 28.....	2,669.24	990,900	+130,900
Mar. 31.....	2,669.93	1,121,000	+130,100
Apr. 30.....	2,669.48	1,118,200	-5,800
May 31.....	2,668.49	1,102,700	-15,500
June 30.....	2,668.91	1,082,900	-19,800
July 31.....	2,660.25	1,002,700	-80,200
Aug. 31.....	2,654.21	934,000	-68,700
Sept. 30.....	2,649.46	882,700	-51,300
Water year 1940-41...	-	-	+74,400

## Owyhee River below Owyhee Dam, Oreg.

Location.- Water-stage recorder, lat. 43°39', long. 117°15', in sec. 17, T. 22 S., R. 45 E., three-quarters of a mile downstream from Owyhee Dam. Datum of gage is 2,343.67 feet above mean sea level (levele by Bureau of Reclamation).

Drainage area.- 11,160 square miles.

Records available.- February 1929 to September 1941.

Average discharge.- 12 years, 409 second-feet.

Extremes.- Maximum discharge during year, 4,090 second-feet Apr. 1 (gage height, 7.02 feet); minimum, 6.9 second-feet Oct. 29 to Feb. 25.

1929-41: Maximum discharge, 14,600 second-feet Mar. 21, 1932 (gage height, 12.79 feet); no flow for a few hours Aug. 8, 9, 1932, when temporary diversion tunnel above Owyhee Dam was closed.

Remarks.- Records good. Diversions above station for irrigation. Flow regulated by Owyhee Reservoir (see p. 128).

Cooperation.- Water-stage recorder inspected and gage readings during periods of low flow, Oct. 1-18, Oct. 26 to Mar. 5, and some discharge measurements furnished by Bureau of Reclamation.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

-0.2	6	1.0	103	3.0	670
0	12	1.3	150	3.5	940
.2	21	1.6	207	4.0	1,240
.4	36	1.9	278	4.5	1,590
.6	55	2.2	359	5.0	1,970
.8	78	2.5	458	5.5	2,400

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	6.9	6.9	6.9	6.9	7.5	2,510	195	147	155	150	143
2	9.0	6.9	6.9	6.9	6.9	7.5	1,360	195	136	155	150	143
3	9.0	6.9	6.9	6.9	6.9	7.5	664	195	125	155	150	145
4	9.0	6.9	6.9	6.9	6.9	7.5	858	197	125	176	163	145
5	9.0	6.9	6.9	6.9	6.9	7.5	2,080	203	120	189	185	146
6	9.0	6.9	6.9	6.9	6.9	1,030	1,820	199	117	189	181	145
7	9.0	6.9	6.9	6.9	6.9	839	1,870	174	97	189	181	145
8	9.0	6.9	6.9	6.9	6.9	469	2,440	168	12	189	181	145
9	9.0	6.9	6.9	6.9	6.9	524	1,320	168	12	189	181	147
10	9.0	6.9	6.9	6.9	6.9	642	1,130	166	12	189	181	147
11	9.0	6.9	6.9	6.9	6.9	618	1,660	170	12	189	183	145
12	9.0	6.9	6.9	6.9	6.9	565	1,000	174	35	189	183	143
13	9.0	6.9	6.9	6.9	6.9	406	1,790	174	122	169	169	143
14	9.0	6.9	6.9	6.9	6.9	258	2,190	174	127	189	193	143
15	9.0	6.9	6.9	6.9	6.9	209	803	174	130	189	191	143
16	9.0	6.9	6.9	6.9	6.9	172	765	174	143	189	181	143
17	9.0	6.9	6.9	6.9	6.9	51	781	174	185	189	165	143
18	9.0	6.9	6.9	6.9	6.9	44	680	174	185	189	143	143
19	86	6.9	6.9	6.9	6.9	76	477	174	161	189	142	145
20	116	6.9	6.9	6.9	6.9	193	374	174	163	169	145	143
21	116	6.9	6.9	6.9	6.9	152	360	174	164	189	145	143
22	116	6.9	6.9	6.9	6.9	116	374	174	164	189	147	143
23	116	6.9	6.9	6.9	6.9	86	273	174	164	189	150	143
24	116	6.9	6.9	6.9	6.9	55	211	174	170	189	150	145
25	62	6.9	6.9	6.9	6.9	43	211	174	174	189	150	145
26	7.8	6.9	6.9	6.9	7.2	43	216	174	164	189	147	145
27	7.8	6.9	6.9	6.9	7.5	42	234	174	155	189	143	145
28	7.2	6.9	6.9	6.9	7.5	43	227	174	155	189	143	145
29	6.9	6.9	6.9	6.9	-	44	222	164	155	189	143	145
30	6.9	6.9	6.9	6.9	-	252	220	147	155	189	143	145
31	6.9	-	6.9	6.9	-	582	-	147	-	172	143	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						913.5	116	6.9	29.5	1,810		
November.....						207.0	6.9	6.9	6.90	411		
December.....						213.9	6.9	6.9	6.90	424		
Calendar year 1940.....						33,015.0	1,160	-	90.2	65,480		
January.....						213.9	6.9	6.9	6.90	424		
February.....						194.7	7.5	6.9	6.95	356		
March.....						7,591.5	1,030	7.5	245	15,060		
April.....						29,030	2,510	211	968	57,580		
May.....						5,448	203	147	176	10,610		
June.....						3,809	185	12	127	7,560		
July.....						5,727	169	155	185	11,360		
August.....						5,012	193	142	162	9,940		
September.....						4,322	147	143	144	8,570		
Water year 1940-41.....						62,682.5	2,510	6.9	172	124,340		

Peak discharge.- Apr. 1 (8 p.m.) 4,090 sec.-ft.; Apr. 8 (8 a.m.) 3,100 sec.-ft.

Note.- Discharge Oct. 1-16, Oct. 26 to Mar. 5 based on readings of staff gage.

## BOISE RIVER BASIN

Boise River near Twin Springs, Idaho

Location.- Water-stage recorder, lat. 43°40', long. 115°44', in sec. 27, T. 4 N., R. 6 E., a quarter of a mile upstream from Birch Creek, 1½ miles upstream from flow line of Arrowrock Reservoir, 4 miles downstream from Twin Springs, and 13 miles upstream from Arrowrock.

Drainage area.- 830 square miles.

Records available.- March 1911 to September 1941.

Average discharge.- 30 years, 1,095 second-feet.

Extremes.- Maximum discharge during year, 4,830 second-feet May 27 (gage height, 5.72 feet); minimum, 160 second-feet Dec. 12 (gage height, 1.86 feet).  
1911-41: Maximum discharge, 10,300 second-feet May 17, 1927 (gage height, 8.30 feet), from rating curve extended above 8,000 second-feet; minimum, 133 second-feet Dec. 15, 1935 (gage height, 1.56 feet).

Remarks.- Records good except those Dec. 17 to Jan. 8, which are fair. No diversions or regulation.

Cooperation.- Result of one discharge measurement furnished by watermaster for Boise River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	374	486	450	a350	374	566	1,080	2,120	2,690	1,110	444	351
2	506	566	432	a320	414	660	1,160	2,090	2,400	1,060	432	368
3	615	559	426	a300	385	622	1,230	2,260	2,470	1,030	414	403
4	506	500	420	b340	356	573	1,150	2,400	2,540	970	397	391
5	450	444	408	a400	368	552	1,220	2,530	2,470	922	385	379
6	426	456	432	a450	397	538	1,120	2,190	2,470	854	379	374
7	403	468	403	a450	462	519	1,060	1,950	2,650	833	374	362
8	355	532	355	a400	456	538	1,020	2,000	2,840	812	368	356
9	374	512	391	328	432	566	1,030	1,890	2,540	778	374	351
10	362	474	312	328	438	559	1,160	1,860	2,330	746	403	351
11	356	450	236	323	468	580	1,180	2,110	2,400	722	432	351
12	351	397	190	317	519	580	1,270	3,060	2,620	708	698	414
13	340	306	195	356	474	566	1,350	3,950	2,840	676	500	335
14	345	385	210	403	450	512	1,330	3,460	3,060	652	438	368
15	a340	414	279	379	438	512	1,390	2,920	2,840	652	408	385
16	a335	403	334	362	414	532	1,290	2,540	2,620	630	391	397
17	a330	438	b470	351	414	566	1,180	2,470	2,330	601	391	374
18	a325	480	b520	356	420	594	1,100	2,690	2,260	573	638	356
19	b323	403	486	362	444	698	1,010	2,490	2,470	573	500	351
20	a320	351	a435	356	426	714	970	2,190	2,190	559	450	379
21	a320	403	h379	356	420	690	960	2,190	1,950	538	426	368
22	a320	356	a400	356	444	698	970	2,620	1,860	519	414	356
23	317	301	a400	356	414	690	1,040	3,140	1,870	500	408	351
24	323	345	a400	362	526	688	1,170	3,460	1,760	486	391	351
25	456	438	a400	379	532	675	1,260	3,620	1,610	474	397	351
26	426	356	a400	397	462	738	1,360	4,120	1,440	468	397	345
27	414	356	a450	379	462	812	1,490	4,290	1,360	587	397	340
28	408	391	h438	323	486	884	1,670	3,460	1,350	545	385	334
29	397	486	a400	323	-	980	1,820	2,820	1,290	552	379	334
30	408	519	a400	356	-	1,080	2,020	2,690	1,180	493	379	328
31	444	-	a400	362	-	1,060	-	2,760	-	468	368	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	11,999	615	317	397	0.466	0.54	23,800
November.....	12,975	566	301	432	.520	.58	26,740
December.....	11,881	520	190	383	.461	.53	25,570
Calendar year 1940.....	377,497	5,020	190	1,031	1.24	16.91	748,700
January.....	11,180	450	300	361	.435	.50	22,180
February.....	12,295	532	356	439	.529	.55	24,390
March.....	20,522	1,080	512	662	.798	.92	40,700
April.....	37,050	2,020	960	1,235	1.49	1.66	75,490
May.....	83,950	4,290	1,860	2,708	3.28	3.76	166,500
June.....	66,740	3,060	1,180	2,225	2.68	2.99	132,400
July.....	21,123	1,110	468	681	.820	.95	41,900
August.....	13,157	698	368	424	.511	.59	26,100
September.....	10,904	414	328	363	.437	.49	21,530
Water year 1940-41.....	313,776	4,290	190	860	1.04	14.06	622,400

a No gage-height record; discharges computed on basis of weather records and records for Arrowrock Reservoir and for nearby stations.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.



## Arrowrock Reservoir at Arrowrock, Idaho

Location.- Graduations on upstream face of dam on Boise River, lat. 43°36', long. 115°55', in E<sup>1</sup>/<sub>2</sub> sec. 15, T. 3 N., R. 4 E., at Arrowrock, 22 miles by road east of Boise. Datum of gage is at mean sea level (surveys of Bureau of Reclamation).

Drainage area.- 2,210 square miles.

Records available.- October 1917 to September 1941.

Extremes.- Maximum contents observed during year, 300,600 acre-feet May 27 (elevation, 3,218.9 feet); minimum observed, 39,090 acre-feet Sept. 30 (elevation, 3,085.1 feet). 1917-41: Maximum contents observed, 300,900 acre-feet May 4, 5, 1939 (elevation, 3,219.0 feet); no storage during period in each of several years when natural flow was passing through reservoir.

Remarks.- Reservoir is formed by gravity-section concrete-arch dam completed in 1915 and raised 5 feet in 1937; storage began in 1915. Capacity, 291,600 acre-feet between elevations 2,956 (11 feet below center line of sluice gates, 8.5 feet below sill) and 3,216 feet (crest of movable spillway at highest position). Dead storage negligible. Figures given herein represent total contents, which, project officials state, may have been reduced as much as 5,000 or 6,000 acre-feet by the deposition of silt. Water is used for irrigation of lands in Boise Valley. Gage read once daily about 8 a.m.

Cooperation.- Gage-height record and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42,960	53,120	84,650	98,730	145,600	169,900	220,600	234,100	297,500	289,400	185,100	92,620
2	42,330	55,080	84,200	99,920	147,000	171,800	222,600	235,600	296,200	286,200	182,200	89,420
3	42,420	57,480	83,450	101,100	148,200	174,200	224,700	237,200	298,900	286,400	179,300	86,600
4	42,780	59,640	82,400	102,300	149,400	176,500	226,800	240,600	296,600	284,300	176,200	83,900
5	42,780	61,820	81,800	103,500	150,000	178,600	228,900	245,000	297,200	282,200	172,700	81,050
6	42,780	63,510	81,200	105,200	150,400	180,400	231,700	250,000	297,800	279,200	169,100	78,320
7	42,510	65,460	80,600	106,700	150,600	181,900	234,100	254,400	298,400	276,200	165,300	75,660
8	42,240	67,670	80,150	108,400	150,900	183,000	235,900	257,900	299,000	272,600	161,700	73,000
9	41,880	69,750	79,448	109,800	151,000	184,400	237,700	262,500	298,700	268,200	157,700	70,400
10	42,600	71,700	78,740	111,300	151,100	185,800	239,800	266,500	298,700	265,400	153,500	67,930
11	43,320	73,560	77,760	112,700	151,400	186,900	243,200	270,500	298,400	261,600	149,600	65,460
12	44,200	75,240	76,360	113,900	152,300	188,300	246,300	274,000	298,600	257,600	147,000	62,860
13	45,000	76,920	74,820	115,000	153,500	188,800	249,300	280,700	298,700	253,400	145,400	60,650
14	45,700	78,040	73,140	116,600	154,400	189,400	252,300	289,100	299,000	249,500	143,000	58,560
15	46,500	79,440	71,700	118,400	155,000	190,100	254,500	291,600	299,000	246,300	140,000	56,520
16	46,900	81,200	70,140	120,100	155,700	191,700	256,800	294,100	298,900	241,400	136,900	54,240
17	47,400	82,850	71,180	121,700	156,400	193,800	257,900	295,300	298,400	237,200	133,800	51,910
18	47,900	84,650	72,610	123,200	156,800	196,400	258,200	295,600	298,100	233,300	130,400	49,490
19	48,300	86,600	74,680	124,700	157,300	199,600	257,600	295,900	298,300	229,100	128,200	46,600
20	47,700	88,300	76,640	126,200	158,000	202,700	256,200	295,300	298,100	225,200	125,500	43,800
21	46,500	89,580	78,320	127,800	158,800	205,800	253,700	295,500	297,800	221,300	122,400	43,320
22	45,000	90,540	80,300	129,300	159,500	209,800	250,300	295,600	297,500	217,500	119,500	43,050
23	43,500	90,060	82,250	130,800	160,700	211,200	247,100	296,600	297,200	213,500	116,500	42,780
24	42,240	88,940	84,200	132,400	161,900	213,000	244,000	297,600	297,000	209,600	113,200	42,510
25	41,070	88,140	86,000	134,200	163,800	214,000	241,400	298,100	296,600	206,000	110,300	42,240
26	42,780	87,350	87,980	136,200	165,500	214,500	238,500	299,000	295,600	202,400	107,700	42,060
27	44,500	86,600	89,740	138,200	166,800	215,200	236,000	300,600	293,600	198,800	105,400	41,790
28	46,200	85,700	91,820	139,800	168,100	216,000	234,000	300,300	292,100	195,900	102,800	41,520
29	47,900	85,100	93,580	141,200	-	216,500	233,000	299,000	291,300	193,100	100,400	41,180
30	49,490	84,950	95,180	141,600	-	217,600	233,000	298,400	290,500	190,400	98,050	39,090
31	51,250	-	97,030	144,200	-	219,000	-	297,500	-	187,600	95,500	-

Monthly elevation and contents, water year October 1940 to September 1941

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	3,090.7	44,200	-
Oct. 31.....	3,097.5	51,250	+7,050
Nov. 30.....	3,123.3	84,950	+33,700
Dec. 31.....	3,130.9	97,030	+12,080
Calendar year 1940...	-	-	+62,060
Jan. 31.....	3,156.6	144,200	+47,170
Feb. 28.....	3,168.15	168,100	+23,900
Mar. 31.....	3,190.0	219,000	+50,900
Apr. 30.....	3,195.4	233,000	+14,000
May 31.....	3,217.9	297,500	+64,500
June 30.....	3,216.65	290,500	-7,000
July 31.....	3,177.0	187,800	-102,900
Aug. 31.....	3,130.00	95,500	-92,100
Sept. 30.....	3,085.1	39,090	-56,410
Water year 1940-41...	-	-	-5,110

† Elevation at about 8 a.m.

Boise River at Dowling Ranch, near Arrowrock, Idaho

Location.- Water-stage recorder, lat. 43°35', long. 115°58', in sec. 15, T. 3 N., R. 4 E., at Dowling Ranch, three-quarters of a mile upstream from Moore Creek and 4 miles downstream from Arrowrock.

Drainage area.- 2,220 square miles.

Records available.- March 1911 to September 1941.

Average discharge.- 30 years, 2,192 second-feet.

Extremes.- Maximum discharge during year, 8,380 second-feet May 27 (gage height, 7.10 feet); minimum, 2 second-feet Jan. 12 (gage height, 0.78 foot).

1911-41: Maximum discharge, 17,600 second-feet May 11, 1928 (gage height, 9.55 feet); minimum, 2 second-feet several days in 1935, 1936, 1939, and 1941; minimum gage height, 0.62 foot Nov. 21, 22, 1935.

Remarks.- Records good except those below 20 second-feet, which are fair. Flow regulated by Arrowrock Reservoir (see p. 131). No diversions above station.

Cooperation.- Gage-height record furnished by Bureau of Reclamation. Results of four discharge measurements furnished by watermaster for Boise River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	6	1,150	5	6	366	1,530	3,930	5,450	2,740	2,260	2,120
2	1,060	6	1,240	5	89	274	1,470	3,830	4,770	2,820	2,340	2,120
3	1,000	6	1,270	6	229	194	1,470	3,540	4,340	2,990	2,340	2,050
4	1,000	6	1,190	5	322	198	1,650	2,990	4,440	2,990	2,490	1,980
5	960	6	1,140	5	486	270	1,360	2,740	4,340	3,080	2,490	1,980
6	942	6	1,140	5	750	375	1,260	2,420	4,340	3,170	2,570	1,980
7	933	6	1,060	5	898	492	1,260	2,340	4,770	3,260	2,570	1,980
8	933	6	1,140	5	906	605	1,260	2,050	5,570	3,350	2,650	1,980
9	840	6	1,130	4	906	647	1,290	1,840	4,990	3,260	2,650	1,910
10	318	5	1,130	4	906	712	1,230	1,980	4,550	3,260	2,650	1,840
11	302	6	1,120	4	806	758	1,110	2,560	4,550	3,260	2,650	1,910
12	294	5	1,120	4	640	830	1,210	3,260	4,550	3,350	2,420	1,840
13	306	5	1,110	4	579	881	1,410	3,540	4,770	3,350	2,420	1,780
14	314	5	1,110	7	592	890	1,650	4,790	5,100	3,350	2,420	1,720
15	370	5	1,110	6	592	733	1,890	5,040	4,990	3,350	2,420	1,760
16	415	5	466	5	592	11	2,260	4,550	4,770	3,260	2,420	1,840
17	415	5	8	5	592	8	2,490	4,880	4,340	3,260	2,420	1,910
18	420	6	6	5	598	8	2,820	5,100	4,130	3,260	2,340	2,050
19	701	5	5	4	605	7	2,900	5,220	4,240	3,080	2,260	2,120
20	1,170	23	5	5	553	7	3,260	4,660	4,130	3,080	2,260	1,370
21	1,360	305	5	5	516	7	3,640	4,440	3,730	2,990	2,340	830
22	1,360	633	6	5	516	64	3,730	4,660	3,440	2,990	2,340	830
23	1,360	1,040	6	5	516	566	3,830	5,450	3,260	2,900	2,260	830
24	1,360	1,140	7	6	420	866	4,030	6,450	3,260	2,820	2,260	822
25	534	1,140	6	8	352	1,160	4,130	6,980	3,260	2,740	2,120	814
26	8	1,140	7	12	357	1,360	4,240	7,250	3,540	2,740	1,980	798
27	6	1,140	8	9	362	1,530	4,240	8,090	3,350	2,650	1,910	806
28	5	1,150	7	8	366	1,650	4,130	7,250	2,990	2,570	1,910	814
29	5	1,140	6	8	-	1,910	4,030	6,190	2,820	2,420	1,840	1,300
30	6	1,150	6	8	-	1,780	3,930	5,690	2,740	2,340	1,840	1,720
31	5	-	6	7	-	1,530	-	5,450	-	2,260	1,980	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						19,712	1,360	5	636	39,100		
November.....						10,107	1,150	5	337	20,060		
December.....						17,710	1,270	5	571	35,130		
Calendar year 1940.....						697,763	8,960	4	1,906	1,384,000		
January.....						179	12	4	5.8	355		
February.....						15,062	906	6	538	29,860		
March.....						20,679	1,910	7	667	41,020		
April.....						74,800	4,240	1,110	2,493	148,400		
May.....						159,160	8,090	1,840	4,489	276,000		
June.....						125,520	5,570	2,740	4,184	249,000		
July.....						92,940	3,350	2,260	2,996	184,300		
August.....						71,820	2,650	1,840	2,317	142,500		
September.....						47,824	2,120	798	1,594	94,860		
Water year 1940-41.....						635,503	8,090	4	1,741	1,261,000		

## Boise River at Boise, Idaho

Location.— Water-stage recorder, lat. 43°36'00", long. 116°11'30", in N.W. 1/4 sec. 14, T. 8 N., R. 2 E., 700 feet upstream from Broadway Bridge at Boise, Idaho.

Records available.— February 1940 to September 1941.

Extremes.— Maximum discharge during year, 5,730 second-feet May 27 (gage height, 6.53 feet); minimum recorded, 8 second-feet Mar. 8-15; minimum gage height recorded, 1.93 feet Mar. 8, 12, 14.

1940-41: Maximum discharge, 6,620 second-feet May 14, 1940 (gage height, 6.76 feet); minimum recorded, that of Mar. 8-15, 1941; minimum gage height recorded, that of Mar. 8, 12, 14, 1941.

Remarks.— Records good except those for periods of fragmentary or no gage-height record, which are poor. Flow regulation by Arrowrock Reservoir (see p. 131). New York, Ridenbaugh, and several smaller canals divert between Moore Creek and this station.

Rating tables, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Mar. 17 to May 27)

Oct. 1 to Dec. 5

Dec. 6 to Sept. 30

2.0	11	1.9	6	3.5	610	5.5	3,300
2.3	50	2.2	36	3.9	930	5.9	4,200
2.6	125	2.5	104	4.3	1,330	6.3	5,200
2.9	230	2.8	209	4.7	1,870	6.6	6,010
3.2	390	3.1	358	5.1	2,520		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	300	110	f41	78	131	10	381	1,640	2,890	879	618	527
2	250	140	a12	73	f91	11	433	1,590	2,440	879	648	618
3	235	166	a10	64	f48	10	398	1,540	1,610	1,030	656	610
4	265	166	a10	86	h20	10	375	1,290	1,640	1,050	662	596
5	255	143	a10	116	h18	10	427	1,130	1,500	1,080	678	554
6	186	120	f116	131	h17	10	227	966	1,410	1,080	670	534
7	172	119	418	148	h24	10	269	837	2,200	1,070	670	520
8	172	125	66	141	h17	0	433	805	3,960	1,010	701	534
9	162	149	h27	125	h17	8	561	618	3,840	957	725	527
10	176	146	h19	113	h16	8	632	632	3,200	922	733	514
11	162	137	h14	107	h20	8	547	837	2,990	934	725	514
12	131	131	h18	99	14	8	445	1,230	2,800	939	749	514
13	131	113	h14	101	13	8	547	1,410	2,890	930	655	501
14	125	85	h11	125	13	8	514	2,060	3,090	913	610	482
15	125	87	h12	148	12	8	610	2,880	3,090	913	655	482
16	186	97	h11	134	12	93	561	1,960	2,610	904	670	475
17	190	119	128	125	11	304	575	2,150	2,040	870	685	488
18	180	88	94	125	11	353	813	2,350	1,530	845	733	463
19	162	104	104	125	11	392	948	2,520	1,740	821	596	494
20	190	94	125	122	10	392	1,150	2,050	1,750	757	603	482
21	155	90	141	125	10	392	1,520	1,650	1,100	749	670	469
22	146	a40	144	122	11	320	1,550	1,690	939	749	678	451
23	131	a10	158	122	11	376	1,500	2,350	1,040	749	670	433
24	131	a12	181	125	15	42	1,590	3,400	1,030	725	670	433
25	225	a18	159	138	17	20	1,660	3,840	1,000	701	589	433
26	218	h17	155	205	13	101	1,710	4,200	1,240	709	386	415
27	131	a14	177	197	11	168	1,800	5,330	1,210	709	375	409
28	104	a11	222	169	10	197	1,760	4,690	993	693	364	427
29	95	f24	193	152	-	254	1,680	3,620	904	693	358	421
30	101	f44	169	144	-	501	1,650	3,090	854	678	353	469
31	92	-	155	144	-	404	-	2,950	-	632	358	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	5,287	300	92	171	10,490
November.....	2,727	166	10	90.9	5,410
December.....	3,144	418	10	101	6,240
Calendar year .....	-	-	-	-	-
January.....	3,929	205	64	127	7,790
February.....	624	131	10	22.3	1,240
March.....	4,434	501	8	143	8,790
April.....	27,286	1,800	227	910	54,120
May.....	67,205	5,330	618	2,168	133,500
June.....	59,530	3,960	854	1,984	118,100
July.....	26,540	1,090	632	856	52,640
August.....	18,912	749	353	610	37,610
September.....	14,789	618	409	493	29,330
Water year 1940-41.....	234,407	5,330	8	642	465,000

a No gage-height record; discharge computed on basis of other Boise River records.

f Computed on basis of partly estimated gage-height record.

h Computed from staff-gage readings.

## Boise River at Notus, Idaho

Location.— Water-stage recorder, lat. 43°43', long. 116°48', in SE¼ sec. 34, T. 5 N., R. 4 W., 380 yards upstream from steel highway bridge, a quarter of a mile southeast of Notus, and 7 miles northwest of Caldwell. Datum of gage is 2,288.55 feet above mean sea level (Corps of Engineers, U. S. Army datum — Boise River Surveys).

Records available.— April 1920 to September 1941.

Average discharge.— 19 years (1920-22, 1924-41), 1,024 second-feet.

Extremes.— Maximum discharge during year, 4,330 second-feet May 23 (gage height, 5.70 feet); minimum, 16 second-feet July 10 (gage height, 0.08 foot).  
1920-41: Maximum discharge observed, 4,500 second-feet May 19, 20, 1921; maximum gage height, 9.12 feet May 3, 1938; minimum discharge, 10 second-feet Aug. 18, 1920.

Remarks.— Records good. Station is below all large diversions for irrigation in Boise Valley; many diversions above. Flow regulated by Arrowrock Reservoir (see p. 131).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	476	615	484	540	555	458	489	143	2,440	148	38	62
2	480	686	498	466	550	444	480	198	2,370	78	36	71
3	435	714	466	444	507	444	453	360	1,600	59	35	127
4	408	702	462	466	466	426	430	408	1,230	48	35	175
5	435	675	448	480	444	426	516	378	1,060	41	38	190
6	435	650	444	494	435	417	565	322	797	25	37	162
7	358	640	550	512	476	408	354	205	1,300	25	33	141
8	342	625	714	530	484	408	253	168	3,340	23	34	133
9	354	625	507	516	458	399	238	208	4,160	21	34	114
10	310	640	458	502	471	394	378	78	3,260	20	29	112
11	307	640	440	489	555	394	484	56	2,800	21	32	104
12	286	620	430	484	585	386	382	42	2,440	21	36	102
13	256	605	412	476	516	382	322	36	2,160	21	66	118
14	241	595	404	507	498	386	350	152	2,300	23	55	133
15	212	575	404	565	480	382	215	1,790	2,230	26	50	139
16	170	570	399	555	466	378	135	1,200	1,840	28	46	127
17	205	570	440	540	458	430	104	945	1,290	31	44	133
18	205	580	507	545	453	615	70	1,220	833	30	46	125
19	182	550	494	545	448	680	56	1,500	890	27	79	114
20	172	565	507	550	440	714	59	1,250	1,160	24	74	150
21	252	560	530	545	435	708	89	560	897	26	58	178
22	458	550	540	545	435	719	190	262	570	25	51	205
23	440	494	555	545	444	675	135	340	354	24	57	195
24	494	480	560	555	462	627	84	1,060	175	27	55	180
25	600	476	575	585	516	422	65	2,230	107	24	59	168
26	680	466	585	686	453	370	72	2,440	64	24	60	172
27	746	452	570	670	435	374	148	3,420	89	28	69	188
28	635	471	580	635	435	370	215	4,080	175	34	84	198
29	620	484	610	600	-	374	198	3,180	253	36	82	200
30	615	480	590	575	-	399	145	2,580	259	38	65	180
31	615	-	570	565	-	560	-	2,580	-	39	58	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						12,414	746	170	400	24,620		
November.....						17,365	714	462	578	34,440		
December.....						15,724	714	399	507	31,190		
Calendar year 1940.....						293,040	5,980	18	801	581,200		
January.....						16,712	686	444	539	33,150		
February.....						13,370	595	435	478	26,520		
March.....						14,569	712	370	470	28,900		
April.....						7,719	565	56	257	15,310		
May.....						33,381	4,080	36	1,077	66,210		
June.....						42,443	4,160	64	1,415	84,180		
July.....						1,065	148	20	34.4	2,110		
August.....						1,575	64	29	50.8	3,120		
September.....						4,396	205	62	147	8,720		
Water year 1940-41.....						180,733	4,160	20	495	358,500		

## Diversions from Boise River, Idaho

Twenty-seven principal canals and several small farm laterals divert water from Boise River for irrigation below mouth of Moore Creek and between gaging stations at Dowling Ranch and Notus. Records for years 1919-41 are available; record of daily diversions after 1915 on file in office of Idaho Commissioner of Reclamation.

Daily gage-height records obtained, frequent discharge measurements made, and records summarized under direction of W. E. Welsh, watermaster for Boise River.

Total amount of water, in acre-feet, diverted by each canal during irrigation season of 1941

Canal	Diversion
Main Canal of Bureau of Reclamation.....	595,450
Penitentiary.....	1,570
Ridenbaugh.....	159,490
Bubb.....	4,720
Consumers (Cruzen).....	5,610
Boise City No. 1.....	10,000
Settlers.....	46,170
Thurman Mill.....	9,330
Farmers Union (includes Boise Valley diversion).....	56,200
New Union (Little Union).....	4,540
New Dry Creek (Dry Creek).....	17,830
Ballantine.....	3,220
Eagle Island canals (7).....	12,220
Middleton Irrigation Association (Middleton Water Co.).....	34,220
Middleton Mill ditch.....	14,440
Phyllis.....	104,050
Bureka No. 1.....	9,260
Pioneer (Little Pioneer).....	7,850
Canyon County.....	20,140
Caldwell High Line.....	19,930
Riverside No. 2.....	59,520
Farmers Cooperative.....	78,090
Canyon (Campbell).....	4,240
Seibenberg.....	2,750
Pioneer Dixie.....	11,960
Bureka No. 2.....	14,630
Upper Center Point.....	3,730
Lower Center Point.....	4,850
Miscellaneous.....	8,190
Total.....	1,324,190

Combined monthly discharge of canals diverting from Boise River, Idaho, during irrigation season of 1941.

Month	Discharge in second-feet			Run-off in acre-feet
	Maximum	Minimum	Mean	
April.....	5,234	1,737	3,194	190,000
May.....	5,791	3,549	5,045	310,200
June.....	5,308	3,651	4,482	266,700
July.....	4,064	3,074	3,750	230,600
August.....	3,373	2,646	3,059	188,100
September.....	2,847	1,510	2,329	135,600
The period.....	-	-	-	1,324,200

## BOISE RIVER BASIN

## Cottonwood Creek at Arrowrock Reservoir, Idaho

**Location.**— Water-stage recorder and broad-crested wooden control with trapezoidal notch for low stages, lat. 43°38', long. 115°49', in NW¼NE¼ sec. 2, T. 3 N., R. 5 E., at flow line of Arrowrock Reservoir, just downstream from unnamed tributary, three-quarters of a mile downstream from Ranger Creek and Cottonwood ranger station, and 5½ miles northeast of Arrowrock.

**Drainage area.**— 21.4 square miles.

**Records available.**— January 1939 to November 1941 (discontinued).

**Extremes.**— 1940-41: Maximum discharge during water year, 29 second-feet May 3; maximum gage height, 3.15 feet May 27; minimum, 0.89 second-foot Aug. 7 (gage height, 2.11 feet).

1939-41: Maximum discharge, 96 second-feet Mar. 26, 1940 (gage height, 3.47 feet), from rating curve extended above 60 second-feet; minimum, 0.21 second-foot Aug. 23, 1940 (gage height, 1.96 feet).

**Remarks.**— Records good except those for periods of ice effect or missing gage-height record, which are fair. One small diversion above station for irrigation. Station is operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-feet, 1940-41  
1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	4.9	3.8	4.6	5.7	14	18	21	12	5.7	1.3	1.3
2	2.9	5.7	3.6	4.2	8.0	15	17	18	11	5.8	1.1	1.4
3	3.2	4.6	3.6	4.4	5.7	14	18	25	10	4.6	1.1	1.5
4	2.5	4.2	3.6	4.6	5.7	13	17	24	9.6	4.4	1.1	1.5
5	2.2	3.8	3.6	4.4	5.5	13	20	23	9.0	4.2	1.1	1.7
6	2.0	3.6	3.8	4.2	5.7	12	20	21	8.6	3.8	1.1	1.7
7	1.9	4.6	3.6	4.2	7.0	12	17	20	17	3.4	1.1	1.7
8	1.8	4.6	3.5	4.0	6.3	12	17	22	18	2.1	1.0	1.7
9	1.7	4.0	3.5	3.8	6.3	12	15	20	13	2.4	1.1	1.8
10	1.8	3.8	2.8	3.8	7.0	12	21	20	11	2.3	1.1	1.7
11	1.8	3.6	b2.5	3.8	8.8	12	20	22	11	2.4	1.8	1.8
12	1.8	3.0	2.2	3.8	9.6	11	20	24	9.6	2.7	3.6	1.9
13	1.8	2.8	2.2	3.8	9.2	10	20	23	9.0	2.7	2.0	1.9
14	1.8	3.0	2.2	4.9	9.2	9.6	20	21	8.3	2.2	1.7	1.9
15	1.8	3.0	2.1	4.2	8.8	9.6	20	19	7.7	1.9	1.6	1.9
16	1.8	2.9	2.2	4.0	8.4	9.6	18	18	8.0	1.8	1.3	1.9
17	1.8	3.0	2.9	4.0	8.4	11	17	18	7.2	2.0	1.6	1.9
18	1.8	3.4	3.5	4.0	8.0	12	17	17	9.0	2.0	1.6	1.8
19	1.8	3.0	3.4	4.2	8.0	12	16	16	9.0	1.8	1.6	1.8
20	1.8	2.9	3.2	4.2	7.6	11	16	15	7.2	1.6	1.4	1.9
21	1.8	2.9	3.6	4.2	8.0	12	15	14	6.6	1.5	1.3	1.9
22	1.9	2.5	4.4	4.2	9.2	12	16	13	5.5	1.4	1.2	1.9
23	1.9	2.3	5.2	4.4	10	12	17	12	5.5	1.3	1.2	1.8
24	2.2	2.4	5.2	4.9	13	12	18	18	5.2	1.4	1.2	1.9
25	4.6	2.7	4.9	6.0	13	13	18	11	5.5	1.4	1.3	1.9
26	3.4	2.8	4.6	7.0	12	13	20	13	5.5	1.4	1.3	1.9
27	3.0	2.9	7.0	6.3	12	14	19	15	5.5	1.8	1.4	1.9
28	2.7	3.2	5.7	6.0	12	15	19	13	6.0	2.0	1.4	1.9
29	3.0	4.6	5.2	6.0	-	16	20	12	6.7	2.0	1.4	1.9
30	3.4	4.2	4.9	5.7	-	16	21	18	5.7	1.8	1.4	1.9
31	-	a4.8	5.7	-	-	16	-	14	-	1.8	1.2	-

a No gage-height record or gage reading not representative of mean for day; discharge interpolated.

b Stage-discharge relation affected by ice.

**Note.**— Stage-discharge relation affected by backwater from Arrowrock Reservoir May 25 to June 23; discharge computed on the basis of readings on auxiliary staff gage 140 feet above gage house.

1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	2.0	3.0	9	2.9	3.2	17	2.7	-	25	2.8	-
2	2.0	3.0	10	3.2	3.0	18	2.8	-	26	2.8	-
3	2.0	3.4	11	3.0	-	19	3.2	-	27	2.8	-
4	2.3	4.2	12	3.0	-	20	3.4	-	28	3.2	-
5	2.8	3.5	13	2.9	-	21	2.8	-	29	3.2	-
6	3.0	3.5	14	2.8	-	22	2.7	-	30	2.9	-
7	2.8	3.4	15	2.8	-	23	2.7	-	31	2.9	-
8	2.9	3.2	16	2.8	-	24	2.5	-			

Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-foot
October 1940	72.1	4.6	1.7	2.33	0.109	0.13	143
November	104.9	5.7	2.3	3.50	.164	.18	208
December	117.3	7.0	2.1	3.78	.177	.20	233
Calendar year 1940	3,672.11	68	.25	10.0	.467	6.40	7,280
January 1941	143.5	7.0	3.8	4.63	.216	.25	286
February	236.1	13	5.5	8.43	.394	.41	468
March	397.8	16	9.6	12.5	.594	.67	769
April	548	21	15	18.3	.855	.95	1,090
May	548	25	11	17.7	.827	.95	1,090
June	260.9	17	5.2	8.70	.407	.45	517
July	77.0	5.7	1.3	2.48	.116	.13	153
August	43.7	3.6	1.0	1.41	.066	.08	87
September	53.6	1.9	1.3	1.79	.084	.09	106
Water year 1940-41	2,592.9	25	1.0	7.10	.332	4.49	5,150
October 1941	96.6	3.4	2.0	2.79	0.130	0.15	172
November 1-10	33.4	4.2	3.0	3.34	.156	.068	66

## South Fork of Boise River near Lenox, Idaho

Location.- Water-stage recorder, lat. 43°30', long. 115°41', in sec. 24, T. 2 N., R. 6 E., 1½ miles upstream from Smith Creek, 4 miles upstream from flow line of Arrowrock Reservoir, 4 miles west of discontinued Lenox post office, 13 miles upstream from mouth, and 17 miles upstream from Arrowrock Dam.

Drainage area.- 1,090 square miles.

Records available.- March 1911 to September 1941.

Average discharge.- 30 years, 947 second-feet.

Extremes.- Maximum discharge during year, 3,880 second-feet May 13 (gage height, 6.65 feet); minimum daily, 180 second-feet (affected by ice) Dec. 12, 13.  
1911-41: Maximum discharge, 9,200 second-feet May 15, 1917 (gage height, 9.53 feet), from rating curve extended above 6,500 second-feet; minimum, 111 second-feet Aug. 10, 1934; minimum gage height, 1.68 feet Sept. 5-7, 1931.

Remarks.- Records good except those for period of ice effect, which are fair. Some water stored in Little Camas Reservoir and diverted for irrigation of about 5,000 acres of land in vicinity of Mountain Home.

Cooperation.- Result of one discharge measurement furnished by watermaster for Boise River.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308	386	379	290	286	502	1,110	2,270	2,270	946	372	297
2	372	420	366	279	311	565	1,180	2,270	2,070	866	360	283
3	525	462	346	262	297	534	1,210	2,360	1,960	822	334	301
4	471	424	348	330	301	502	1,140	2,590	2,170	772	319	311
5	391	353	346	383	290	493	1,240	2,590	2,070	745	308	382
6	356	372	357	424	319	502	1,140	2,580	1,980	708	283	a313
7	334	399	341	399	383	498	1,040	2,070	2,270	676	269	a306
8	322	445	319	368	383	516	1,010	2,070	2,580	651	285	a296
9	315	416	311	315	375	548	1,040	1,930	2,380	616	269	a286
10	304	399	290	304	376	565	1,240	1,880	2,170	587	283	279
11	297	372	232	286	383	562	1,280	2,070	2,070	562	352	283
12	293	348	b180	283	391	562	1,240	2,820	2,170	548	1,010	283
13	290	286	b180	290	379	565	1,210	3,730	2,170	554	621	304
14	290	286	b200	341	348	516	1,240	3,590	2,170	516	475	301
15	283	326	b220	341	346	498	1,280	3,060	2,170	498	416	297
16	279	357	311	319	330	516	1,280	2,700	2,070	484	387	297
17	279	345	387	297	308	562	1,210	2,590	1,880	466	368	297
18	283	367	534	297	326	671	1,110	2,590	1,740	454	441	290
19	272	379	471	315	345	734	1,010	2,480	1,830	445	466	283
20	269	350	462	319	366	729	977	2,270	1,700	441	399	286
21	269	322	395	311	348	723	946	2,170	1,480	436	379	297
22	269	337	383	311	364	729	977	2,380	1,400	412	375	293
23	269	276	376	315	403	718	1,040	2,820	1,320	399	372	290
24	263	279	383	319	465	702	1,130	3,180	1,240	387	366	293
25	311	337	362	330	465	718	1,240	3,180	1,210	379	345	295
26	345	354	345	352	399	772	1,320	3,320	1,110	375	345	297
27	352	304	360	315	372	857	1,440	3,590	1,040	416	341	297
28	372	319	330	269	424	1,010	1,700	2,940	1,070	454	334	297
29	360	376	293	252	-	1,110	1,830	2,590	1,070	449	311	290
30	360	441	315	269	-	1,180	2,170	2,380	977	416	304	290
31	360	-	319	266	-	1,110	-	2,380	-	337	301	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	10,033	525	269	325	0.298	0.34	20,000
November.....	10,523	462	276	361	.331	.37	21,470
December.....	10,401	534	180	356	.306	.36	20,650
Calendar year 1940.....	299,451	4,190	161	818	.750	10.21	594,100
January.....	9,771	424	252	315	.289	.33	19,380
February.....	10,060	466	236	359	.329	.34	19,960
March.....	20,738	1,180	493	669	.614	.71	41,130
April.....	37,130	2,170	946	1,234	1.13	1.26	73,660
May.....	31,260	3,730	1,880	2,621	2.40	2.77	161,200
June.....	53,337	2,590	977	1,795	1.65	1.84	106,800
July.....	16,867	946	375	544	.499	.65	33,460
August.....	11,760	1,010	265	379	.348	.40	23,330
September.....	8,567	322	279	296	.271	.30	17,570
Water year 1940-41.....	281,687	3,730	180	771	.707	9.60	558,600

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

## BOISE RIVER BASIN

Grouse Creek near Arrowrock, Idaho

Location.— Water-stage recorder and broad-crested wooden control with rectangular flume for low flow, lat. 43°35', long. 115°55', in sec. 19, T. 3 N., R. 5 E., at Sanders Ranch, at flow line of Arrowrock Reservoir, just upstream from Little Grouse Creek and 1½ miles southeast of Arrowrock.

Drainage area.— 8.0 square miles.

Records available.— January 1939 to November 1941 (discontinued).

Extremes.— 1940-41: Maximum discharge during water year, 29 second-feet Feb. 24 (gage height, 2.61 feet), from rating curve extended above 10 second-feet; minimum, 0.2 second-foot Aug. 10; minimum gage height, 1.09 feet Nov. 13.

1939-41: Maximum discharge recorded, about 89 second-feet Mar. 23, 1939 (gage height, 2.66 feet), from rating curve extended above 23 second-feet by logarithmic plotting; minimum, 0.15 second-foot Aug. 9, 1939; minimum gage height, 1.05 feet Aug. 18-21, 1940.

Remarks.— Records good except those for discharges above 10 second-feet, which are fair. No diversions or regulation. Station operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-feet, 1940-41  
1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.83	2.0	1.4	0.82	2.7	20	3.2	2.5	1.3	0.87	0.42	0.56
2	.96	2.1	1.3	.96	2.6	15	3.4	2.4	1.2	.82	.38	.80
3	.90	1.4	1.3	1.2	2.4	11	3.9	3.2	1.3	.77	.38	.80
4	.83	1.2	1.3	1.6	2.2	9.3	3.8	2.7	1.2	.69	.35	.64
5	.83	1.2	1.3	1.5	2.2	8.9	5.5	2.7	1.1	.60	.35	.60
6	.77	1.2	1.3	1.4	3.6	6.4	4.5	2.4	2.1	.56	.32	.64
7	.71	1.5	1.2	1.5	6.4	5.2	4.0	2.4	5.5	.52	.35	.64
8	.71	1.4	1.1	1.4	3.9	5.2	3.7	2.8	3.7	.52	.35	.69
9	.71	1.3	1.1	1.3	3.9	5.2	3.7	2.3	2.7	.49	.35	.69
10	.71	1.2	.77	1.3	9.6	5.0	5.5	2.0	2.2	.49	.32	.69
11	.71	1.2	b.70	1.3	16	4.5	5.0	1.9	1.9	.49	1.1	.69
12	.71	.83	b.60	1.2	11	4.1	5.0	c1.8	1.7	.49	.96	.77
13	.71	.71	b.50	1.3	5.8	3.8	4.5	c2.0	1.7	.45	.56	.77
14	.71	.77	b.45	2.5	5.0	3.5	4.5	1.9	1.6	.45	.49	.77
15	.71	.90	.52	2.0	4.7	3.5	4.7	1.7	1.4	.49	.45	.77
16	.77	.90	.60	1.7	4.5	3.5	4.2	1.6	1.4	.49	.42	.77
17	.71	.96	.77	1.7	4.2	3.7	4.0	1.6	1.3	.45	.42	.73
18	.71	1.2	1.1	1.7	4.1	4.0	3.8	1.6	1.6	.45	.45	.73
19	.77	1.0	1.1	1.8	4.0	3.9	3.6	1.5	1.9	.45	.49	.77
20	.77	.96	1.3	1.8	4.0	3.7	3.5	1.3	1.4	.42	.45	.77
21	.77	1.0	1.9	1.9	4.2	3.5	3.3	1.3	1.2	.42	.49	.77
22	.77	.83	2.6	1.9	8.3	3.5	3.2	1.2	1.0	.42	.49	.82
23	.77	.77	2.9	2.0	12	3.4	3.1	1.1	.87	.58	.49	.73
24	.90	.90	3.2	2.3	20	3.1	2.9	1.2	.87	.42	.49	.77
25	2.0	.90	2.5	5.9	10	3.0	2.8	1.3	.91	.42	.56	.77
26	1.3	.96	2.2	6.1	6.4	2.9	2.7	2.2	.87	.60	.56	.77
27	1.2	.96	3.7	4.2	7.0	2.8	2.6	1.7	.87	.60	.56	.77
28	1.0	1.4	2.8	3.6	15	2.8	2.5	1.4	1.4	.64	.56	.82
29	1.3	2.2	2.3	3.3	-	3.4	2.4	1.3	1.3	.52	.52	.77
30	1.4	1.7	2.2	3.0	-	3.2	2.3	1.5	1.0	.45	.56	.73
31	1.4	-	1.8	2.8	-	3.0	-	1.6	-	.42	.56	-

b Stage-discharge relation affected by ice.

c Stage-discharge relation affected by backwater from debris caused by fallen tree; discharge based on estimated effective gage height.

1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	0.73	0.96	9	.82	-	17	.82	-	25	1.0	-
2	.77	1.1	10	.82	-	18	.82	-	26	.96	-
3	.77	1.3	11	.82	-	19	1.2	-	27	.96	-
4	1.0	1.5	12	.82	-	20	1.0	-	28	1.2	-
5	.87	1.1	13	.87	-	21	.95	-	29	.96	-
6	.87	1.1	14	.82	-	22	.91	-	30	.96	-
7	.82	1.0	15	.82	-	23	.91	-	31	-	-
8	.82	1.0	16	.82	-	24	.91	-	-	-	-

Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October 1940	28.05	2.0	0.71	0.905	0.113	0.13	58
November	35.55	2.2	.71	1.13	.148	.17	71
December	47.81	3.7	.45	1.54	.192	.22	95
Calendar year 1940	1,194.18	39	.17	3.26	.408	5.57	2,370
January 1941	66.98	6.1	.82	2.16	.270	.31	133
February	185.7	20	2.2	6.63	.829	.86	368
March	164.0	20	2.8	5.29	.661	.76	325
April	111.6	5.5	2.3	3.73	.466	.52	222
May	58.1	3.2	1.1	1.87	.234	.27	115
June	48.49	5.5	.87	1.62	.202	.23	96
July	16.25	.87	.38	.524	.066	.08	32
August	15.20	1.1	.32	.490	.061	.07	30
September	21.61	.82	.56	.720	.090	.10	43
Water year 1940-41	799.54	20	.32	2.19	.274	3.73	1,590
October 1941	27.82	1.2	0.73	0.897	0.112	0.13	55
November 1-8	9.06	1.5	.96	1.13	.141	.04	18



## Little Camas canal at heading near Bennett, Idaho

Location.- Staff gage, lat. 43°21'30", long. 115°23', in sec. 9, T. 1 S., R. 9 E., 400 feet downstream from Little Camas Reservoir, 4 miles northeast of Bennett, and 22 miles northeast of Mountain Home.

Records available.- June to November 1917, April 1924 to September 1941.

Extremes.- Maximum discharge observed during year, 55 second-feet June 12-14 (gage-height, 2.03 feet); no flow prior to Apr. 8 and after July 23.

1917, 1924-41: Maximum discharge observed, 77 second-feet Apr. 27-30, May 1, 3, 9, 1924; no flow during nonirrigation seasons.

Remarks.- Records good. Staff gage read once daily. Canal diverts from Little Camas Reservoir (South Fork of Boise River drainage) in sec. 9, T. 1 S., R. 9 E., and discharges into Long Tom Creek Basin, where water is stored in Long Tom Reservoir for irrigation of 5,000 acres of land near Mountain Home. No diversions above station. Flow regulated by head gates at Little Camas Reservoir.

Cooperation.- Gage-height record furnished by Mountain Home Irrigation District.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	42	50	48		
2							0	42	51	47		
3							0	42	54	47		
4							0	43	53	46		
5							0	42	54	46		
6							0	43	53	46		
7							0	42	53	46		
8							a8	43	53	47		
9							13	43	53	46		
10							15	43	53	46		
11							16	43	53	45		
12							15	43	54	44		
13							16	43	55	42		
14							19	43	55	42		
15							22	42	54	40		
16							26	42	54	38		
17							35	42	54	35		
18							41	42	53	36		
19							44	42	52	36		
20							43	42	52	35		
21							42	42	52	34		
22							43	42	52	29		
23							42	42	51	16		
24							42	42	50	0		
25							42	42	50	0		
26							42	42	50	0		
27							42	41	50	0		
28							42	44	49	0		
29							42	47	48	0		
30							42	49	48	0		
31							-	50	-	0		
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							0	0	0	0	0	
November.....							0	0	0	0	0	
December.....							0	0	0	0	0	
Calendar year 1940.....							5,494	54	0	15.0	10,890	
January.....							0	0	0	0	0	
February.....							0	0	0	0	0	
March.....							0	0	0	0	0	
April.....							734	44	0	24.5	1,460	
May.....							1,332	50	41	43.0	2,640	
June.....							1,563	55	48	52.1	3,100	
July.....							940	48	0	30.3	1,860	
August.....							0	0	0	0	0	
September.....							0	0	0	0	0	
Water year 1940-41.....							4,569	55	0	12.5	9,060	

a No gage-height record; discharge completed on basis of reported change in gate opening.

## Moore Creek above Granite Creek, near Idaho City, Idaho

Location.- Water-stage recorder, lat. 43°50', long. 115°47', in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 19, T. 6 N., R. 6 E., 1,000 feet upstream from Hoodoo Creek, five-eighths of a mile upstream from Granite Creek, and 2 3/8 miles northeast of Idaho City.

Drainage area.- 37.0 square miles.

Records available.- January 1939 to November 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 109 second-feet May 13 (gage height, 2.56 feet); minimum, 1.5 second-feet Oct. 21, 22 (gage height, 1.10 feet). 1939-41: Maximum discharge, 261 second-feet Mar. 27, 1940 (gage height, 3.55 feet), from rating curve extended above 200 second-feet; minimum, 0.8 second-foot July 24, 1940 (gage height, 1.05 feet).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Gold Hill Placer diversion takes water from creek for use in mining 4 1/8 miles above station. Some of this water is used to supplement domestic supply of Idaho City. Return flow enters Moore Creek through Elk Creek. Station operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-feet, 1940-41  
1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	15	15	7.9	13	38	31	64	48	4.2	2.4	2.4
2	14	22	14	b8.0	13	40	34	58	43	4.2	2.6	2.8
3	13	19	14	b8.0	13	37	34	75	40	4.0	3.0	2.8
4	9.7	16	16	b8.0	16	34	31	75	38	3.4	2.4	3.0
5	10	13	16	b9.0	14	32	35	71	36	3.0	2.4	2.8
6	9.7	13	17	9.1	16	31	31	63	34	2.8	2.1	2.8
7	9.1	17	16	9.1	17	29	29	57	52	2.8	2.1	2.8
8	9.1	18	15	9.1	16	26	25	55	53	2.6	2.1	2.8
9	8.5	18	16	9.1	16	21	31	52	44	2.6	2.1	2.6
10	8.5	16	9.1	9.7	16	18	29	53	39	2.6	2.1	2.6
11	8.5	15	9.1	9.7	19	16	29	64	35	2.6	3.2	2.8
12	8.5	12	b8.0	9.7	20	14	34	82	32	2.6	6.9	3.0
13	8.5	12	b8.0	10	18	9.7	35	96	31	2.4	5.6	3.4
14	7.9	13	b9.0	12	18	11	35	87	27	2.6	5.1	3.4
15	7.2	13	b10	12	18	8.6	43	70	24	2.6	5.1	3.7
16	a2.3	12	b11	12	17	8.6	34	59	20	2.4	5.1	3.4
17	a2.2	13	b12	12	17	11	27	54	18	2.4	12	3.2
18	a2.0	13	b12	12	17	16	24	50	27	2.4	11	3.4
19	a1.9	12	b12	12	17	16	20	44	27	2.6	3.4	3.7
20	1.8	12	b12	12	17	13	19	40	18	2.6	2.6	3.7
21	1.5	12	12	12	17	12	18	40	15	2.4	2.4	4.0
22	1.5	9.1	14	12	22	12	19	44	11	2.6	2.1	4.2
23	1.8	9.7	15	13	25	11	26	50	7.6	2.8	2.1	4.5
24	2.3	12	14	13	31	11	29	55	6.2	3.2	2.1	4.6
25	16	12	13	15	28	12	33	60	5.9	3.2	2.1	4.8
26	9.7	11	12	15	24	16	36	73	5.1	3.2	2.1	5.1
27	9.7	12	15	13	23	18	40	70	5.6	4.2	2.1	5.9
28	11	13	13	12	26	20	47	60	6.6	4.5	2.4	7.6
29	12	21	12	12	-	26	54	46	6.2	4.0	2.4	8.0
30	12	18	12	12	-	31	61	48	4.8	3.2	2.4	7.6
31	13	-	12	13	-	29	-	55	-	2.4	2.4	-

a No gage-height record; discharge computed on basis of two discharge measurements, records for Gold Hill placer diversion and other stations on Moore Creek.

b Stage-discharge relation affected by ice.

1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	8.6	10	9	5.1	11	17	8.3	-	25	9.4	-
2	8.0	10	10	7.6	11	18	8.3	-	26	9.0	-
3	6.2	12	11	9.4	-	19	9.7	-	27	9.4	-
4	6.6	23	12	9.4	-	20	9.4	-	28	9.7	-
5	7.2	16	13	8.6	-	21	9.0	-	29	9.4	-
6	5.6	13	14	8.6	-	22	8.6	-	30	9.4	-
7	5.4	12	15	8.6	-	23	9.0	-	31	9.7	-
8	5.1	12	16	8.6	-	24	9.0	-			

Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1940	341.4	16	1.5	7.79	479
November	422.8	22	9.1	14.1	859
December	392.2	17	8.0	12.7	778
Calendar year 1940	10,901.7	218	1.1	29.8	21,630
January 1941	342.4	15	7.9	11.0	679
February	524	31	13	18.7	1,040
March	627.9	40	8.6	20.3	1,250
April	973	61	18	32.4	1,930
May	1,868	96	40	60.3	3,710
June	759.0	53	4.8	25.3	1,510
July	93.1	4.5	2.4	3.00	186
August	107.9	12	2.1	3.48	214
September	117.3	8.0	2.4	3.91	235
Water year 1940-41	6,469.0	96	1.5	17.7	12,860
October 1941	255.6	9.7	5.1	8.25	507
November 1-10	130	23	10	13.0	268

## Moore Creek above Thorn Creek, near Idaho City, Idaho

Location.- Water-stage recorder and broad-crested concrete-block control, lat. 43°46', long. 115°55', in ~~N.W. 1/4~~ sec. 18, T. 5 N., R. 5 E., 1 1/2 miles upstream from Thorn Creek and 5 1/2 miles southwest of Idaho City.

Drainage area.- 119 square miles.

Records available.- January 1939 to November 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 226 second-feet May 13 (gage height, 2.77 feet); minimum recorded, 13 second-feet Sept. 20 (gage height, 1.38 feet). 1939-41: Maximum discharge, 725 second-feet Mar. 27, 1940 (gage height, 4.38 feet); minimum, 4.4 second-feet Aug. 30, 1939 (gage height, 1.18 feet).

Remarks.- Records good except those for periods of ice effect, which are fair. Many diversions above station for placer mining. A small ditch diverts water from Thorn Creek into Pine Creek for mining use. Flow slightly regulated by passage through dredged areas near Idaho City. Station operated in connection with a study of silt movement in Boise River Basin.

Discharge, in second-feet, 1940-41  
1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	40	37		33	98	117	181	159	55	19	18
2	26	51	35		32	119	130	155	124	51	18	19
3	32	58	32		30	110	141	169	115	49	17	21
4	28	46	31		31	*100	136	190	103	45	16	20
5	23	37	30		32	96	161	188	106	40	15	20
6	20	34	31	b25	33	96	151	173	102	38	14	19
7	19	36	30		37	88	138	155	139	35	14	18
8	17	44	29		37	87	126	153	134	34	14	19
9	17	43	29		35	87	123	141	143	32	15	18
10	16	38	28		*36	86	147	139	124	30	16	18
11	17	34	b25		46	*82	155	149	115	31	21	18
12	19	28	b20		59	78	153	171	107	31	46	19
13	17	22	b15	(*)	54	75	155	212	103	31	33	20
14	15	21	b15		47	67	149	201	100	30	26	20
15	15	26	b20		46	68	151	180	93	30	21	20
16	16	28	b25	b27	38	67	141	155	90	30	18	20
17	16	28	b30		41	70	132	143	86	29	19	20
18	15	30	b35		39	84	121	139	95	27	47	19
19	a15	26	b35	27	59	88	110	123	110	27	39	19
20	a15	23	b35	27	41	92	102	117	93	23	29	16
21	a15	24	b40	27	43	88	98	110	81	22	26	18
22	16	26	b40	27	58	81	100	110	78	21	23	17
23	18	28	42	27	82	105	119	119	67	19	22	18
24	19	29	46	27	90	82	110	128	64	19	21	17
25	36	24	42	31	90	82	114	136	63	19	20	18
26	32	22	38	34	74	86	121	147	61	20	21	18
27	27	24	50	32	68	90	126	155	60	23	18	18
28	26	25	46	31	71	98	136	141	54	25	16	18
29	26	40	36	32	-	107	145	123	64	25	16	18
30	28	46	*35	33	-	121	149	153	69	23	19	18
31	32	-	32	34	-	121	-	143	-	20	18	-

\* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

## 1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	19	25	9	a22	25	17	21	-	25	20	-
2	21	24	10	a22	23	18	21	-	26	21	-
3	20	20	11	a22	-	19	23	-	27	21	-
4	20	38	12	a22	-	20	26	-	28	23	-
5	24	35	13	22	-	21	24	-	29	23	-
6	26	30	14	22	-	22	22	-	30	23	-
7	a24	27	15	21	-	23	18	-	31	23	-
8	a23	25	16	21	-	24	18	-			

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

## Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October 1940.....	652	38	15	21.0	0.176	0.20	1,290
November.....	979	58	21	32.6	.274	.31	1,940
December.....	1,012	50	15	32.6	.274	.32	2,010
Calendar year 1940.....	27,242	629	4.9	74.4	.625	8.51	54,030
January 1941.....	849	34	-	27.4	.230	.27	1,680
February.....	1,350	90	30	48.2	.405	.42	2,680
March.....	2,776	121	67	89.5	.752	.87	5,510
April.....	3,941	161	98	131	1.10	1.23	7,820
May.....	4,658	212	110	150	1.26	1.45	9,240
June.....	2,910	163	59	97.0	.815	.91	5,770
July.....	934	55	19	30.1	.283	.29	1,850
August.....	679	47	14	21.9	.184	.21	1,350
September.....	560	21	16	16.7	.157	.18	1,110
Water year 1940-41.....	21,300	212	14	58.4	.491	6.66	42,250
October 1941.....	678	26	18	21.9	0.184	0.21	1,340
November 1-10.....	272	38	20	27.2	.229	.09	540

## Moore Creek near Arrowrock, Idaho

Location.- Staff gage, lat. 43°35', long. 115°59', in sec. 21, T. 3 N., R. 4 E., at bridge on Boise-Arrowrock highway, a quarter of a mile upstream from mouth and 3 miles south-west of Arrowrock.

Drainage area.- 426 square miles.

Records available.- October 1914 to November 1915 (discharge measurements only), December 1915 to September 1941.

Average discharge.- 25 years (1916-41), 283 second-feet.

Extremes.- Maximum discharge observed during year, 838 second-feet Apr. 5 (gage height, 2.82 feet); minimum observed, 20 second-feet Dec. 16; minimum gage height observed, 0.30 foot Aug. 8.  
1915-41: Maximum discharge observed, 4,550 second-feet Apr. 19, 1936; maximum gage height observed, 6.3 feet (datum then in use) Apr. 11, 1916; minimum discharge observed, 7.9 second-feet Aug. 13-15, 17, 18, 1924; minimum gage-height observed, 0.09 foot Aug. 28, 29, Sept. 1, 1939.

Remarks.- Records fair. Gage read once daily. No large diversions above station.

Cooperation.- Gage-height record furnished by Board of Control for Boise project. Results of four discharge measurements furnished by watermaster for Boise River.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	127	156	98	117	338	478	478	478	180	52	51
2	65	156	127	60	138	550	550	500	388	156	49	51
3	82	222	115	54	131	432	578	560	347	142	47	54
4	85	167	103	85	101	388	550	606	367	136	41	88
5	70	129	109	107	94	347	838	578	327	121	41	54
6	60	111	109	117	98	367	635	578	308	115	38	58
7	53	109	103	129	155	367	578	500	500	113	36	54
8	53	156	90	109	167	388	500	560	635	98	34	52
9	51	156	96	92	156	410	478	500	478	90	36	52
10	48	140	83	85	156	388	605	455	388	85	35	56
11	48	115	48	65	e220	367	665	455	367	83	39	53
12	48	99	39	59	e300	347	578	500	327	90	113	54
13	49	68	35	71	e250	327	578	635	327	89	98	62
14	48	52	25	117	e210	303	578	605	308	85	73	56
15	47	60	21	129	e190	289	578	605	308	87	54	59
16	46	62	20	119	e170	289	578	500	272	92	48	59
17	48	73	46	111	e160	327	525	478	254	87	41	56
18	47	87	65	117	e170	410	500	455	254	80	156	56
19	45	82	111	127	e170	410	455	452	388	75	117	56
20	42	53	142	134	e170	388	410	388	347	68	85	53
21	45	56	167	134	e180	388	388	388	272	65	68	51
22	45	54	180	127	e210	367	388	388	208	62	65	51
23	46	41	222	125	e260	347	388	367	180	58	56	51
24	47	35	289	121	e390	367	410	410	193	54	48	53
25	101	64	238	129	e400	367	432	478	193	52	54	53
26	156	60	193	222	e310	367	500	432	193	48	54	54
27	105	51	208	180	272	410	455	578	193	53	54	53
28	87	64	254	144	272	410	455	478	208	62	52	53
29	83	111	193	115	-	432	455	410	222	65	52	56
30	87	222	180	99	-	578	455	367	208	60	53	53
31	103	-	156	111	-	500	-	478	-	56	51	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	2,001	156	42	64.5	0.151	0.17	3,970
November.....	2,982	222	35	99.4	.233	.26	5,910
December.....	3,923	289	20	127	.298	.34	7,780
Calendar year 1940.....	97,214	3,090	14	266	.624	8.51	192,800
January.....	3,492	222	54	113	.265	.31	6,930
February.....	5,618	400	94	201	.472	.49	11,140
March.....	12,020	578	289	388	.911	1.05	23,840
April.....	15,561	838	388	519	1.22	1.36	30,860
May.....	15,121	635	367	488	1.15	1.33	29,990
June.....	9,438	635	180	315	.739	.82	18,720
July.....	2,707	180	48	87.3	.205	.24	5,370
August.....	1,820	156	34	58.7	.158	.16	3,610
September.....	1,532	62	51	54.4	.128	.14	3,240
Water year 1940-41.....	76,315	838	20	209	.491	6.67	151,400

e Stage-discharge relation indefinite; discharge computed on basis of records for Moore Creek above Thorn Creek near Idaho City, Boise River at Dowling Ranch near Arrowrock, and New York canal.

## Gold Hill placer diversion from Moore Creek near Idaho City, Idaho

Location.- Water-stage recorder, lat. 43°53', long. 115°44', in sec. 3, T. 6 N., R. 6 E., just downstream from highway bridge, 760 feet downstream from headgates, and 6 miles northeast of Idaho City. Prior to Feb. 25, 1941, staff gage at same site and datum.

Records available.- April 1939 to November 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 44 second-feet Aug. 17 (gage height, 1.72 feet), from rating curve extended above 30 second-feet; no flow Oct. 1-14, Oct. 29 to Mar. 6.

1939-41: Maximum discharge, that of Aug. 17, 1941; no flow at times during each year.

Remarks.- Records good except those for periods of no gage-height record or periods when part of flow was returning to Moore Creek, which are fair. Staff gage read once daily in October. Canal diverts from right bank of Moore Creek in sec. 3, T. 6 N., R. 6 E., for placer mining and to supplement domestic supply of Idaho City. Water normally returns to Moore Creek through Elk Creek. Station operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-feet, 1940-41

Day	Oct.		Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	0		0	25	28	28	27	9.6	9.3	e2.5	0
2	0		0	25	28	27	26	8.9	11	e3.0	0
3	0		0	24	29	26	24	8.4	10	e5.0	0
4	0		0	24	28	27	22	9.5	9.8	e4.5	0
5	0		0	27	e25	26	20	9.6	9.8	e5.0	0
6	0		0	27	28	27	18	9.6	9.3	e6.5	0
7	0		3.5	26	29	29	18	9.3	9.3	e5.5	0
8	0		7.9	27	29	28	17	9.6	9.3	e6.0	0
9	0		11	e21	29	28	16	10	9.1	e5.0	0
10	0		13	29	30	27	16	9.6	8.6	e2.5	0
11	0		16	29	30	27	16	15	9.3	0	-
12	0		18	29	30	27	15	16	10	0	-
13	0		19	30	28	27	15	12	9.6	0	-
14	0		16	30	26	27	14	11	a9.7	0	-
15	a1.0		18	e23	27	28	14	10	9.8	0	-
16	6.1		21	29	26	28	13	10	8.9	0	-
17	a6.2		24	28	26	28	13	13	8.1	0	-
18	a6.4		26	27	27	27	13	15	7.9	0	-
19	6.5		26	26	27	26	12	15	e7.5	0	-
20	6.5		26	26	28	27	12	a14	e7.5	0	-
21	a6.9		26	26	29	27	11	a14	e7.0	0	-
22	6.9		26	27	29	29	10	a13	e7.0	0	-
23	6.9		25	e25	29	31	9.3	a12	e6.5	0	-
24	a6.9		25	28	28	32	9.3	a12	e6.5	0	-
25	4.2		27	29	28	32	9.1	11	e6.0	0	-
26	3.9		26	29	29	31	8.9	11	e6.0	0	-
27	a3.9		28	29	25	34	8.9	10	e5.0	0	-
28	a2.0		27	29	e23	35	11	10	e3.5	0	-
29	0		27	28	27	32	11	9.8	e4.0	0	-
30	0		24	28	28	29	10	9.6	e3.5	0	-
31	0		25	-	28	-	9.3	9.1	-	0	-

a No gage-height record; discharge interpolated or computed on basis of records for Moore Creek above Granite Creek and above Thorn Creek, and for Elk Creek near Idaho City.

e Adjusted for flow diverted back to Moore Creek above station above Granite Creek on basis of records for Moore Creek above Granite Creek and above Thorn Creek and for Elk Creek near Idaho City.

Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1940	74.3	6.9	0	2.40	147
November	0	0	0	0	0
December	0	0	0	0	0
Calendar year 1940	2,355.6	28	0	6.44	4,680
January 1941	0	0	0	0	0
February	0	0	0	0	0
March	550.4	28	0	17.1	1,050
April	808	30	21	26.9	1,600
May	861	30	23	27.8	1,710
June	856	35	25	28.5	1,700
July	449.3	27	e.9	14.5	891
August	345.6	16	8.4	11.2	687
September	235.8	11	3.5	7.96	474
Water year 1940-41	4,164.4	35	0	11.4	8,260
October 1941	45.5	6.5	0	1.47	90
November 1-10	0	0	0	0	0

## Granite Creek near Idaho City, Idaho

Location.- Water-stage recorder and broad-crested wooden control, lat. 43°49'30", long. 115°47'00", three-eighths of a mile upstream from mouth and 2½ miles east of Idaho City.

Drainage area.- 4.8 square miles.

Records available.- January 1939 to November 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 5.7 second-foot Mar. 1 (gage height, 2.66 feet); minimum, 0.18 second-foot Nov. 12.

1939-41: Maximum discharge, 21 second-foot Mar. 27, 1940 (gage height, 2.70 feet), from rating curve extended above 12 second-foot; minimum, that of Nov. 12, 1940.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversion or regulation. Station operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-foot, 1940-41  
1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.65	1.2	0.99	0.87	0.87	4.0	2.7	3.1	1.4	0.89	0.41	0.44
2	.91	1.3	.94	.82	.87	3.7	2.8	3.0	1.3	.84	.37	.52
3	.77	1.2	.94	.82	*.87	3.0	3.2	3.4	1.3	.80	.36	.51
4	.65	1.0	.91	.82	.87	3.0	3.2	3.3	1.2	.76	.36	.49
5	.59	.94	.94	.82	.87	3.2	4.2	3.2	1.2	.71	.36	.46
6	.67	.91	.94	.82	.94	2.9	3.7	3.0	1.2	.67	.34	.44
7	.55	*1.1	.89	.82	1.1	2.8	3.5	2.9	2.8	.64	.35	.46
8	.55	1.1	.91	.82	.99	2.8	3.4	3.0	2.6	.60	.37	.48
9	.55	1.0	.79	.79	.99	2.7	3.4	2.7	2.1	.58	.38	.48
10	.55	.94	b.70	.82	1.0	2.8	4.0	2.7	1.8	.58	.37	.46
11	.55	.89	b.60	.82	1.6	2.5	4.2	2.7	1.7	.58	1.2	.61
12	.55	.61	b.55	.79	1.7	2.3	4.2	3.0	1.5	.56	.82	.56
13	.55	.65	b.50	*.79	1.4	2.2	4.2	3.1	1.4	.54	.54	.52
14	.55	b.75	b.50	.89	1.4	2.0	4.1	3.0	1.4	.71	.44	.52
15	.55	b.80	b.50	.94	1.2	2.1	4.0	2.6	1.3	.58	.43	.56
16	.55	.82	b.60	.87	b1.2	2.3	3.8	2.4	1.3	.54	.43	.51
17	.55	.87	.75	.84	1.2	2.5	3.6	2.2	1.3	.49	.49	.48
18	.55	.87	.96	.89	1.2	2.6	3.4	2.1	1.7	.51	.67	.46
19	.55	.67	.91	.89	1.2	2.6	3.2	1.9	1.7	.49	.52	.49
20	.55	b.65	.99	.89	1.2	2.6	3.1	1.8	1.3	.44	.49	.51
21	.57	b.60	.99	.89	1.4	2.6	3.0	1.7	1.2	.43	.46	.51
22	.59	b.60	1.3	.89	2.3	2.5	2.9	1.6	1.0	.40	.44	.51
23	.59	b.60	*1.3	.89	2.3	2.5	2.8	1.6	.99	.40	.43	.49
24	.85	b.70	1.2	.91	*2.6	2.4	2.9	1.6	.99	.40	.46	.51
25	1.3	.77	1.1	.91	2.2	2.4	2.8	1.6	.96	.40	.49	.51
26	.79	*.75	.99	.94	1.8	2.4	2.8	2.1	.94	.48	.46	.52
27	.79	.75	1.3	.91	1.8	2.4	2.8	1.8	.96	.52	.43	.52
28	.75	.96	1.0	.91	2.6	2.5	2.9	1.5	1.1	.60	.46	.54
29	.77	1.5	.99	.89	-	2.5	3.0	1.4	1.0	.48	.46	.54
30	.87	1.1	.96	.87	-	2.8	3.0	1.7	.94	.43	.46	.54
31	1.1	-	.91	.87	-	2.7	-	1.7	-	.41	.44	-

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

## 1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	0.58	0.71	9	0.62	0.71	17	0.62	-	25	0.71	-
2	.54	.71	10	.64	.69	18	.60	-	26	.67	-
3	.55	.91	11	.62	-	19	.78	-	27	.67	-
4	.71	.94	12	.62	-	20	.69	-	28	.75	-
5	.80	.75	13	.60	-	21	.65	-	29	.71	-
6	.67	.73	14	.60	-	22	.64	-	30	.67	-
7	.65	.73	15	.60	-	23	.65	-	31	.71	-
8	.64	.71	16	.58	-	24	.65	-			

## Monthly discharge, in second-foot, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-foot
October 1940.....	20.82	1.3	0.55	0.672	0.140	0.16	41
November.....	27.00	1.8	.51	.900	.188	.21	54
December.....	27.85	1.3	.60	.893	.187	.22	55
Calendar year 1940.....	587.55	12	.28	1.61	.335	4.57	1,170
January 1941.....	26.61	.94	.79	.858	.179	.21	53
February.....	39.77	2.3	.57	1.42	.296	.31	79
March.....	82.5	4.0	2.0	2.66	.554	.64	164
April.....	100.8	4.2	2.7	3.36	.700	.78	200
May.....	73.4	3.4	1.4	2.37	.494	.57	146
June.....	41.48	2.8	.94	1.38	.288	.32	82
July.....	17.45	.89	.40	.563	.117	.13	35
August.....	14.67	1.2	.33	.473	.099	.11	29
September.....	15.05	.56	.44	.502	.105	.12	30
Water year 1940-41.....	487.40	4.2	.33	1.34	.279	3.78	958
October 1941.....	20.22	0.80	0.54	0.652	0.136	0.16	40
November 1-10.....	7.59	.94	.69	.759	.158	.06	16

Location.— Water-stage recorder and broad-crested wooden control with V-notch for low stages, lat. 43°48'30", long. 115°46'30", in SE¼ sec. 32, T. 6 N., R. 6 E., three-quarters of a mile upstream from South Fork, 2½ miles upstream from mouth, and 3 1/8 miles southeast of Idaho City.

Records available.- January 1939 to November 1941 (discontinued).

Extremes.— 1940-41: Maximum discharge during water year, 4.7 second-feet Apr. 4; maximum gage height, 1.09 feet Dec. 15 (ice effect); minimum discharge, 0.23 second-foot Aug. 7, 1939-41: Maximum discharge, 23 second-foot Mar. 26, 1940 (gage height, 1.68 feet), from rating curve extended above 10 second-feet; minimum, 0.07 second-foot Aug. 23, 1940 (gage height, 0.21 foot).

Remarks.— Records good except those for Nov. 21-25 and Mar. 10-15 which are fair and those for Dec. 12-16, which are poor. One small diversion above station by Intermountain Range and Experiment Station. Station operated in connection with a study of silt movement in the Boise River Basin.

## 1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.50	0.93	0.64	0.58	0.88	1.6	2.8	3.5	1.7	0.98	0.37	0.34
2	.74	1.3	.64	.58	.88	1.5	3.0	3.4	1.5	.89	.34	.39
3	.64	.89	.64	.58	.88	1.3	3.4	4.0	1.4	.85	.34	.39
4	.82	.78	.64	.61	.88	1.2	3.5	4.0	1.4	.85	.34	.39
5	.50	.71	.68	.61	.88	1.2	4.1	4.2	1.3	.78	.32	.37
6	.47	.68	.68	.61	.88	1.2	3.7	4.0	1.3	.78	.30	.37
7	.44	.86	.64	.61	.71	1.2	3.4	3.9	2.5	.74	.30	.37
8	.44	.86	.61	.61	.88	1.2	3.2	4.0	2.5	.71	.30	.39
9	.44	.74	.68	.68	.68	1.2	3.2	3.7	2.2	.68	.32	.37
10	.44	.68	.50	.58	.68	*bl.2	3.9	3.6	1.9	.64	.32	.37
11	.44	.61	.52	.58	.86	bl.2	3.9	3.5	1.7	.61	1.1	.39
12	.44	.65	b.45	.58	.85	bl.1	4.0	3.7	1.7	.58	.74	.44
13	.44	.65	b.40	.58	.71	bl.0	3.9	3.7	1.6	.58	.47	.42
14	.44	.65	b.35	.61	.68	bl.0	3.9	3.7	1.6	.61	.42	.38
15	.44	.65	b.40	.61	.68	bl.1	3.7	3.4	1.4	.55	.37	.42
16	.44	.58	b.50	.58	.68	1.2	3.6	3.2	1.4	.55	.37	.42
17	.44	.61	.71	.68	.68	1.4	3.4	2.9	1.5	.58	.42	.37
18	.44	.68	.68	.68	.64	1.5	3.5	2.6	1.3	.60	.65	.37
19	.44	*.67	.68	.68	.68	1.6	3.6	2.8	1.6	.50	.37	.47
20	.44	.55	.64	.61	.68	1.6	2.8	2.3	1.5	.44	.42	.39
21	.44	b.60	.64	.61	.71	1.7	2.8	2.2	1.3	.44	.39	.59
22	.44	b.50	.71	.61	.85	1.7	2.7	2.0	1.2	.44	.37	.39
23	.44	b.60	*.71	.61	.89	1.7	2.8	2.0	1.2	.42	.37	.39
24	.68	b.60	.74	.61	*.98	1.7	2.8	2.0	1.2	.39	.67	.39
25	1.1	b.60	.64	.61	.85	1.7	2.9	1.9	1.1	.39	.59	.37
26	.64	.62	.61	.61	.85	1.7	2.9	2.2	1.1	.47	.39	.39
27	.58	.65	.74	*.58	.78	2.0	3.0	1.9	1.1	.82	.37	.42
28	.55	.68	.64	.58	1.2	2.3	3.1	1.7	1.1	.61	.37	.42
29	.55	.98	.61	.58	-	2.7	3.1	1.6	1.1	.47	.37	.42
30	.64	.71	.61	.58	-	2.8	3.2	1.9	1.0	.42	.37	.39
31	.78	-	.61	.58	-	2.7	-	1.9	-	.39	.34	-

b Stage-discharge relation affected by ice.

1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	0.42	0.52	11	0.44	-	21	0.60	-
2	.42	.52	12	.44	-	22	.47	-
3	.39	.68	13	.44	-	23	.47	-
4	.60	.71	14	.44	-	24	.50	-
5	.58	.55	15	.42	-	25	.52	-
6	.52	.55	16	.42	-	26	.52	-
7	.50	.52	17	.42	-	27	.52	-
8	.47	.52	18	.44	-	28	.58	-
9	.47	-	19	.61	-	29	.55	-
10	.44	-	20	.55	-	30	.62	-
						31	.62	-

Monthly discharge, in second-feet, of Bannock Creek near Idaho City, Idaho, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October 1940 .....	16.37	1.1	0.44	0.528	0.117	0.13	32
November.....	20.13	1.3	.80	.671	.149	.17	40
December.....	18.84	.74	.36	.608	.136	.16	37
Calendar year 1940 .....	484.31	11	.12	1.32	.293	4.01	960
January 1941 .....	18.40	.61	.68	.594	.132	.15	36
February.....	20.43	1.2	.58	.730	.162	.17	41
March.....	48.2	2.8	1.0	1.55	.344	.40	96
April.....	99.0	4.1	2.7	3.30	.733	.82	196
May.....	91.0	4.2	1.6	2.94	.658	.76	180
June.....	48.1	2.5	1.0	1.50	.333	.37	89
July.....	18.36	.98	.39	.592	.132	.15	36
August.....	12.68	1.1	.30	.409	.091	.10	25
September.....	11.70	.44	.34	.390	.087	.10	23
Water year 1940-41 .....	420.21	4.2	.30	1.15	.256	3.47	831
October 1941 .....	15.0	.61	.39	.484	.108	.12	30
November 1-8.....	4.57	.71	.52	.571	.127	.04	9.1

Pine Creek above Barry Placer diversion, near Idaho City, Idaho

Location.- Water-stage recorder and broad-crested wooden control with rectangular flume for low stages, lat. 43°48'30", long. 115°48'00", in NW¼ sec. 1, T. 5 N., R. 5 E., 100 feet upstream from headgate of Barry Placer ditch, 1½ miles upstream from mouth, 1 7/8 miles downstream from Davis Placer diversion, and 2 miles southeast of Idaho City.

Drainage area.- 6.1 square miles.

Records available.- February 1940 to November 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 7.1 second-feet May 8 (gage height, 3.92 feet); minimum, 0.05 second-foot at times July 21-25, Aug. 4-6.  
1940-41: Maximum discharge, 29 second-feet Mar. 27, 1940 (gage height, 4.54 feet); no flow July 22, 23, Aug. 3, 4, 8, 9, 1940.

Remarks.- Records good except those for periods of ice effect, which are fair. Water is diverted from left bank of Pine Creek in SE¼ sec. 12, T. 5 N., R. 5 E., 1 7/8 miles above station, for Davis Placer; records of this diversion obtained in SW¼ sec. 1, T. 5 N., R. 5 E. Water is diverted from right bank of Thorn Creek in NW¼ sec. 21, T. 5 N., R. 6 E., into Pine Creek above Davis Placer diversion; records of this diversion are obtained at a site three-quarters of a mile below headgate. Return flow enters Moore Creek below mouth of Pine Creek. Net diversion, in acre-feet, from Pine Creek as determined from these records is given in the following table:

October 1940.....	14	May.....	58
November.....	27	June.....	69
December.....	9	July.....	17
January 1941.....	3	August.....	7
February.....	17	September.....	0
March.....	76	October.....	6
April.....	121	November 1-8.....	3

Station operated in connection with a study of silt movement in the Boise River Basin.



Discharge, in second-feet, of Pine Creek above Barry Placer diversion, near Idaho City, Idaho, 1940-41

1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.25	0.62	0.47	0.74	0.66	2.4	2.0	1.2	0.54	0.25	0.11	0.16
2	.68	1.0	.43	.70	.66	2.6	2.0	1.1	.47	.25	.11	.22
3	.35	.70	.39	.74	.66	2.2	2.4	1.6	.43	.22	.09	.19
4	.29	.61	.43	.78	.66	2.0	2.2	1.3	.39	.19	.09	.16
5	.25	.47	.43	.74	.70	2.0	3.0	4.6	.35	.19	.09	.19
6	.22	.39	.43	.74	.74	2.0	2.6	5.6	.43	.19	.09	.51
7	.22	*.62	.39	.70	.90	2.0	2.4	5.6	1.1	.16	.11	.62
8	.19	.54	.39	.70	.82	2.0	2.2	4.2	1.1	.16	.11	.66
9	.19	.51	.35	.66	.82	1.9	2.2	.82	.86	.16	.14	.66
10	.19	.43	b.30	.62	*.86	*1.8	3.0	.94	.74	.16	.14	.68
11	.19	.39	b.25	.62	1.2	1.7	3.3	.92	.66	.19	.90	.66
12	.16	.29	b.30	.62	1.3	1.6	3.9	1.1	.62	.16	.39	.74
13	.16	b.30	b.25	.62	1.2	1.5	2.7	.86	.54	.16	.22	.66
14	.16	.32	b.25	.74	1.1	1.6	2.4	1.2	.51	.16	.16	.62
15	.16	.29	b.25	.66	.94	1.5	2.3	3.7	.47	.16	.16	.58
16	.19	.29	b.30	.62	.78	1.6	2.2	2.9	.47	.19	.16	.22
17	.19	.35	.35	.66	.74	1.8	2.0	1.1	.51	.14	.22	.16
18	.19	.35	.39	.66	.70	1.8	2.0	.97	.70	.16	.29	.16
19	.19	*.32	.54	.66	.74	1.8	1.8	.94	.70	.14	.22	.16
20	.19	b.30	.70	.66	.74	1.9	1.8	.70	.47	.14	.19	.16
21	.19	.32	.62	.66	.86	1.8	1.7	.47	.43	.11	.16	.16
22	.19	b.30	.94	.66	1.4	1.7	1.6	.47	.35	.09	.16	.16
23	.19	b.30	1.0	.66	1.6	1.8	1.5	.43	.35	.09	.16	.16
24	.43	.29	1.1	.66	*2.1	1.7	1.6	.47	.35	.09	.16	.16
25	.62	.29	.97	.66	1.7	1.7	1.4	.47	.35	.09	.16	.19
26	.35	b.30	.86	.66	1.5	1.7	1.3	.74	.35	.19	.16	.19
27	.29	.32	1.3	*.66	1.3	1.8	1.3	.66	.35	.16	.14	.22
28	.25	.43	1.0	.66	1.4	2.4	1.2	.51	.32	.19	.14	.22
29	.25	.82	.94	.66	-	2.0	1.2	.51	.29	.16	.14	.19
30	.39	.68	*.94	.66	-	2.0	1.1	.78	.29	.11	.14	.22
31	.51	-	.86	.66	-	2.0	-	.66	-	.11	.14	-

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	0.22	0.29	11	0.25	-	21	0.25	-
2	.22	.29	12	.25	-	22	.25	-
3	.25	.47	13	.25	-	23	.25	-
4	.35	.47	14	.22	-	24	.25	-
5	.43	.35	15	.22	-	25	.29	-
6	.35	.32	16	.22	-	26	.29	-
7	.32	.29	17	.22	-	27	.29	-
8	.29	.29	18	.22	-	28	.32	-
9	.29	-	19	.39	-	29	.32	-
10	.25	-	20	.32	-	30	.29	-
						31	.29	-

Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1940 .....	8.17	0.62	0.16	0.264	16
November .....	12.94	1.0	.29	.431	26
December .....	18.12	1.3	.25	.685	36
Calendar year .....	-	-	-	-	-
January 1941 .....	20.90	.78	.62	.674	41
February .....	29.79	2.1	.66	1.03	57
March .....	58.3	2.6	1.5	1.88	116
April .....	62.2	3.9	1.1	2.07	123
May .....	47.42	5.6	.43	1.53	94
June .....	15.49	1.1	.29	.516	31
July .....	4.92	.25	.09	.159	9.8
August .....	5.65	.90	.09	.182	11
September .....	9.94	.74	.16	.331	20
Water year 1940-41 .....	292.83	5.6	.09	.802	581
October 1941 .....	8.62	.43	.22	.278	17
November 1-8 .....	2.77	.47	.29	.346	5.5

## BOISE RIVER BASIN

Elk Creek above Gold Hill Placer diversion, near Idaho City, Idaho

Location.- Water-stage recorder, lat. 43°54'00", long. 115°47'30", in SW¼ sec. 31, T. 7 N., R. 6 E., a quarter of a mile upstream from headgates of Gold Hill Placer diversion, half a mile above Forest King Gulch, and 5½ miles north of Idaho City.

Drainage area.- 13.1 square miles.

Records available.- February 1940 to November 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 172 second-feet Aug. 17 (gage height, 2.48 feet), from rating curve extended above 60 second-feet; minimum, 3.9 second-feet Feb. 17 (gage height, 1.00 foot).

1940-41: Maximum discharge, that of Aug. 17, 1941; minimum discharge, 3.6 second-feet Aug. 20, 1940; minimum gage height, 0.90 foot Feb. 12, 20, 1940.

Remarks.- Records good except those for period of ice effect which are fair. No diversion or regulation above station. Station operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-feet, 1940-41

1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	8.9	6.9	6.3	6.0	12	23	45	36	17	8.2	6.7
2	9.3	12	6.5	6.0	5.6	12	24	42	34	18	8.2	7.4
3	8.4	9.8	6.9	5.3	5.6	11	24	51	32	17	7.8	7.8
4	6.9	8.0	6.9	5.6	5.6	9.9	24	47	32	15	7.4	7.4
5	6.1	8.0	6.9	5.6	6.0	9.9	25	45	30	15	7.0	7.4
6	5.8	8.0	6.5	6.0	6.0	9.4	23	41	29	14	7.0	7.0
7	5.5	9.8	6.5	6.0	6.3	9.9	22	39	38	14	6.7	7.0
8	5.5	9.8	6.1	6.0	6.0	11	21	39	37	13	7.0	7.0
9	5.5	9.3	6.1	6.0	6.0	12	21	37	35	13	7.4	7.4
10	5.5	8.0	6.0	6.0	6.0	11	23	39	32	13	7.4	7.0
11	5.5	7.2	6.5	6.0	6.7	12	22	43	31	12	9.9	7.0
12	6.1	6.5	6.0	6.0	6.3	12	24	50	29	12	10	7.8
13	5.8	7.6	6.0	6.0	6.0	11	25	57	28	12	8.2	7.4
14	5.8	8.9	6.0	6.0	6.0	11	27	52	27	12	7.4	7.4
15	5.8	8.4	6.5	6.0	6.0	10	27	44	27	12	7.4	7.8
16	5.8	8.0	6.0	5.6	5.6	12	25	39	25	11	7.0	7.0
17	5.8	7.2	6.5	5.6	6.0	14	22	36	24	10	13	7.0
18	5.8	7.2	6.0	5.6	6.0	16	20	36	28	11	12	6.7
19	5.8	6.1	7.0	6.0	6.0	15	19	31	27	10	8.6	7.0
20	5.8	6.9	6.7	6.0	6.0	15	19	29	24	10	7.8	7.0
21	5.8	6.5	6.7	5.6	6.3	15	20	28	22	9.9	7.4	7.0
22	5.8	8.9	7.0	5.6	7.0	15	22	28	21	9.4	7.0	7.0
23	5.8	7.6	7.0	5.6	7.8	14	24	30	20	9.4	7.0	7.0
24	7.2	8.0	7.0	5.6	8.2	14	27	32	20	9.0	7.0	7.0
25	13	6.5	6.7	5.6	7.8	15	29	34	19	9.0	7.0	7.0
26	8.0	6.1	6.3	5.6	7.4	17	31	38	18	9.4	7.4	7.0
27	7.6	6.1	7.0	5.3	7.4	19	34	38	19	9.9	7.0	7.0
28	7.2	6.5	6.3	5.6	9.0	19	39	34	20	10	7.0	7.0
29	7.2	8.9	6.3	5.6	-	21	41	31	19	9.4	7.0	7.0
30	7.6	7.2	6.3	5.6	-	22	44	35	18	9.0	7.0	7.0
31	8.4	-	6.3	6.0	-	22	-	38	-	8.6	6.7	-

b Stage-discharge relation affected by ice.

1941

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	7.8	8.2	9	8.2	-	17	7.4	-	25	7.8	-
2	7.4	8.2	10	8.6	-	18	7.4	-	26	8.2	-
3	7.4	11	11	8.2	-	19	8.2	-	27	8.2	-
4	9.4	14	12	8.2	-	20	8.2	-	28	9.0	-
5	9.4	10	13	7.8	-	21	7.8	-	29	8.6	-
6	8.6	9.4	14	7.4	-	22	7.8	-	30	8.2	-
7	8.2	8.6	15	7.4	-	23	7.8	-	31	8.2	-
8	8.2	8.6	16	7.4	-	24	7.8	-			

Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October 1940 .....	206.6	13	5.5	6.66	0.508	0.59	410
November.....	237.9	12	6.1	7.93	.605	.68	472
December.....	197.4	7.0	5.0	6.37	.486	.56	392
Calendar year .....	-	-	-	-	-	-	-
January 1941 .....	179.3	6.3	5.3	5.78	.441	.51	356
February.....	180.6	9.0	5.6	6.45	.492	.51	358
March.....	429.1	22	9.4	13.8	1.05	1.21	851
April.....	771	44	19	25.7	1.96	2.19	1,530
May.....	1,204	57	28	38.8	2.96	3.41	2,390
June.....	801	38	18	26.7	2.04	2.28	1,590
July.....	364.0	18	8.6	11.7	.893	1.03	722
August.....	242.9	13	6.7	7.84	.598	.69	482
September.....	214.2	7.8	6.7	7.14	.545	.61	425
Water year 1940-41 .....	5,028.0	57	5.0	13.8	1.05	14.27	9,980
October 1941 .....	250.2	9.4	7.4	8.07	.616	.71	496
November, 1-8.....	78.0	14	8.2	9.75	.744	.22	155

## New York canal near Barber, Idaho

Location.- Water-stage recorder in trapezoidal concrete-lined canal section, lat. 43°33' long. 116°07', in SE¼NE¼ sec. 32, T. 3 N., R. 3 E., 1 mile south of Barber and 1½ miles downstream from head gates at Boise River diversion dam and power plant.

Records available.- February 1939 to September 1941.

Extremes.- Maximum discharge during year, 2,780 second-feet May 29 (gage height, 9.18 feet); no flow for long periods during year.  
1939-41: Maximum discharge, 2,890 second-feet May 5, 1939; maximum gage height, that of May 29, 1941; no flow for long periods each year.

Remarks.- Records good. Canal diverts from Boise River in sec. 3, T. 2 N., R. 3 E., 8 miles below Moore Creek, for irrigation of 166,396 acres included in Boise Project of Bureau of Reclamation and as a feeder canal for Deer Flat Reservoir near Caldwell (capacity, 177,153 acre-feet). Flow regulated by head gates. Station operated in connection with a study of silt movement in the Boise River Basin.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	795	0	1,310		0	688	1,380	2,240	2,740	1,460	1,180	1,110
2	702	0	1,360		650	771	1,350	2,220	2,730	1,450	1,210	1,050
3	635	0	1,430		7247	629	1,370	2,070	2,740	1,460	1,230	995
4	632	0	1,370		377	582	1,470	1,860	2,740	1,490	1,330	984
5	643	0	1,250		556	590	1,530	1,700	2,740	1,550	1,410	998
6	646	0	943		768	702	1,410	1,560	2,740	1,600	1,440	998
7	646	0	838		1,030	780	1,240	1,490	2,610	1,740	1,490	995
8	649	0	1,240		1,040	804	967	1,640	2,210	1,550	1,520	988
9	460	0	1,230		1,030	974	822	1,680	1,950	1,940	1,540	964
10	0	0	1,220		1,040	1,010	828	1,610	1,950	1,960	1,540	964
11	0	0	1,180		1,030	1,060	840	1,690	2,010	1,960	1,540	984
12	0	0	1,160		936	1,080	852	1,930	1,930	1,960	1,390	970
13	0	0	1,140		810	1,160	942	2,180	1,890	1,960	1,380	911
14	0	0	1,120		792	1,130	1,090	2,400	1,900	1,970	1,370	890
15	0	0	1,120		780	1,110	1,270	2,530	2,000	1,950	1,310	904
16	0	0	684		762	209	1,500	2,580	2,160	1,930	1,310	956
17	0	0	0		750	0	1,680	2,610	2,350	1,910	1,310	1,050
18	0	0	0		753	0	1,740	2,640	2,460	1,900	1,320	1,160
19	1188	0	0		750	0	1,730	2,640	2,340	1,860	1,300	1,240
20	649	0	0		723	0	1,780	2,660	2,330	1,820	1,250	944
21	946	1,246	0		677	0	1,880	2,700	2,500	1,790	1,210	0
22	1,010	590	0		711	0	2,020	2,720	2,150	1,750	1,210	0
23	1,010	1,020	0		768	1,501	2,140	2,730	1,920	1,710	1,210	0
24	998	1,220	0		804	1,100	2,260	2,720	1,820	1,650	1,210	0
25	519	1,250	0		735	1,380	2,320	2,730	1,820	1,560	1,230	0
26	0	1,250	0		655	1,540	2,330	2,730	1,790	1,520	1,210	0
27	0	1,240	0		624	1,620	2,300	2,740	1,610	1,520	1,150	0
28	0	1,250	0		621	1,740	2,290	2,740	1,700	1,450	1,130	0
29	0	1,280	0		-	1,870	2,250	2,720	1,590	1,300	1,090	1,313
30	0	1,310	0		-	1,740	2,190	2,740	1,510	1,200	1,090	819
31	0	-	0		-	1,440	-	2,740	-	1,170	1,100	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					11,128	1,010	0	359	22,070			
November.....					10,656	1,310	0	355	21,140			
December.....					18,595	1,430	0	600	36,880			
Calendar year 1940.....					370,723	2,710	0	1,013	735,300			
January.....					0	0	0	0	0			
February.....					19,829	1,040	0	768	39,330			
March.....					26,320	1,870	0	849	52,200			
April.....					47,801	2,330	828	1,593	94,810			
May.....					71,950	2,740	1,490	2,321	142,700			
June.....					65,199	2,740	1,510	2,175	129,300			
July.....					52,390	1,970	1,170	1,590	103,900			
August.....					40,210	1,540	1,090	1,297	79,760			
September.....					21,187	1,240	0	706	42,020			
Water year 1940-41.....					385,256	2,740	0	1,055	764,100			

a No gage-height record; discharge computed on basis of records for Boise River at Boise.  
f Computed on basis of partly estimated gage-height record.

## Cottonwood Gulch at Boise, Idaho

Location.- Water-stage recorder and broad-crested wooden control with trapezoidal notch for low flows, lat. 43°37', long. 116°11', on United States Military Reservation, 1 mile east of Boise post office.

Drainage area.- 16.0 square miles.

Records available.- January 1939 to December 1941 (discontinued).

Extremes.- 1940-41: Maximum discharge during water year, 12.9 second-feet Jan. 25 (gage height, 4.10 feet); minimum, 0.03 second-foot Aug. 3; minimum gage height, 3.05 feet June 5.

1939-41: Maximum discharge, 62 second-feet Mar. 19, 1939, Mar. 31, 1940; maximum gage height, that of Jan. 25, 1941; no flow, Aug. 25, 1939.

Remarks.- Records good except those below 0.1 second-foot, which are fair. No diversion. Station operated in connection with a study of silt movement in the Boise River Basin.

## Discharge, in second-feet, 1940-41

1940-41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.05	0.16	1.5	1.4	4.9	7.8	3.4	3.9	1.5	0.67	0.10	0.20
2	.05	3.1	1.4	1.2	4.9	8.2	3.9	3.4	1.2	.92	.10	.25
3	.05	1.7	1.4	1.3	4.1	7.8	4.6	5.0	1.2	1.5	.09	.27
4	.04	1.3	1.4	1.7	4.1	7.5	4.6	4.1	1.2	.95	.09	.25
5	.04	1.1	1.4	1.6	3.8	7.4	7.9	3.9	1.1	.51	.09	.22
6	.04	.92	1.3	1.7	3.9	7.6	5.7	3.4	1.3	.61	.07	.25
7	.04	1.0	1.3	1.7	3.8	7.0	5.5	3.3	7.0	.57	.06	.27
8	.04	1.0	1.3	1.7	5.9	6.7	5.2	4.4	7.0	.45	.06	.27
9	.04	1.0	1.3	1.6	5.9	6.4	5.0	3.2	4.4	.42	.06	.25
10	.04	.98	.98	1.5	6.3	6.4	7.3	2.8	3.1	.38	.06	.22
11	.04	1.0	.76	1.5	8.8	6.2	7.6	2.3	2.5	.38	.18	.27
12	.04	.87	.66	1.4	9.6	6.0	8.2	2.2	1.9	.32	.20	.32
13	.04	.70	.57	1.5	9.3	5.5	8.2	2.4	1.8	.27	.13	.32
14	.04	.81	.48	2.5	8.5	5.0	8.2	2.3	1.7	.25	.10	.32
15	.04	.87	.70	2.5	8.0	5.0	7.9	2.1	1.4	.22	.09	.32
16	.04	.92	.78	2.4	7.2	4.6	7.9	2.0	1.4	.18	.09	.32
17	.04	.92	.70	2.5	6.9	4.4	7.3	1.8	1.3	.15	.09	.30
18	.04	.98	.98	3.3	6.6	4.2	7.0	1.9	2.0	.13	.20	.30
19	.04	.92	1.2	3.9	6.3	4.2	6.2	1.8	1.0	.11	.15	.32
20	.04	.98	1.3	3.6	5.9	3.9	6.0	1.6	1.4	.10	.11	.35
21	.04	.98	1.3	3.5	5.9	3.8	5.5	1.4	1.2	.09	.11	.35
22	.04	.87	1.4	3.3	6.3	5.6	5.2	1.3	.92	.09	.11	.35
23	.04	.51	1.5	3.3	6.3	3.4	4.5	1.2	.76	.07	.11	.35
24	.05	.87	1.7	3.9	8.5	3.4	4.4	1.1	.70	.07	.15	.38
25	.05	.87	1.6	6.6	8.5	3.2	4.4	1.2	.76	.07	.18	.35
26	.04	.97	1.7	9.8	8.0	3.2	4.2	1.5	.70	.07	.18	.35
27	.04	.92	2.4	8.0	7.5	3.0	3.9	1.5	.98	.16	.18	.42
28	.04	1.1	2.5	7.5	7.8	2.9	3.8	1.4	1.5	.20	.20	.42
29	.05	1.9	2.4	6.6	-	3.3	3.4	1.3	1.6	.15	.20	.42
30	.05	1.7	2.2	6.1	-	3.4	3.4	1.7	1.1	.13	.20	.42
31	.04	-	2.0	5.5	-	3.0	-	1.6	-	.10	.20	-

1941

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	0.38	1.0	0.98	12	.57	.98	1.1	23	.81	.76	2.8
2	.45	1.1	1.2	13	.61	.98	1.0	24	.81	.98	2.6
3	.45	1.2	1.3	14	.61	1.3	1.3	25	.92	1.0	1.2
4	.52	1.7	1.5	15	.61	1.3	1.5	26	.87	1.0	
5	.57	1.3	1.4	16	.61	1.3	1.3	27	.98	1.0	
6	.61	1.2	1.4	17	.61	1.3	1.4	28	1.3	1.0	a1.5
7	.61	1.2	1.3	18	.66	1.3	2.4	29	1.1	1.0	
8	.66	1.1	1.2	19	.76	1.1	2.8	30	1.0	1.0	
9	.61	1.1	1.0	20	.81	.98	3.3	31	1.0	-	h2.0
10	.57	1.1	1.2	21	.76	1.0	3.2				
11	.57	.98	1.1	22	.81	.76	2.8				

a No gage-height record; discharge computed on basis of records for Moore Creek near Arrowrock.

b Computed from staff gage reading.

## Monthly discharge, in second-feet, 1940-41

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October 1940	1.31	0.05	0.04	0.042	2.6
November	32.12	3.1	.16	1.07	64
December	42.09	2.5	.48	1.36	83
Calendar year 1940	1,244.78	35	.04	3.40	2,470
January 1941	104.6	9.8	1.2	3.87	207
February	185.5	9.6	3.8	6.66	370
March	158.0	8.2	2.9	5.10	313
April	170.6	5.2	3.4	5.69	338
May	73.2	5.0	1.1	2.36	145
June	57.22	7.8	.70	1.91	113
July	10.85	1.5	.07	.350	22
August	3.94	.20	.06	.127	7.8
September	9.40	.42	.20	.313	19
Water year 1940-41	549.83	9.8	.04	2.33	1,680
October 1941	22.21	1.3	.38	.716	44
November	33.02	1.7	.76	1.10	65
December	51.78	3.3	.98	1.67	103
Calendar year 1941	581.32	9.8	.06	2.41	1,750

## Deer Flat Reservoir near Caldwell, Idaho

**Location.**— Staff gages attached to outlet structures at each end of reservoir. One gage is at lower embankment, lat. 43°35', long. 116°45', in SE¼ sec. 19, T. 3 N., R. 3 W., 5 miles south and 2 miles west of Caldwell; the other is at upper embankment, lat. 43°34', long. 116°39', in NW¼ sec. 36, T. 3 N., R. 3 W., 1 mile south and 4 miles west of Nampa. Datum of gage is 2,500.5 feet above mean sea level (surveys of Bureau of Reclamation).

**Records available.**— October 1917 to September 1941.

**Extremes.**— Maximum contents observed during year, 178,100 acre-feet Apr. 20, 21 (gage height, 30.10 feet); minimum observed, 28,000 acre-feet Oct. 1.  
1917-41: Maximum contents observed, 178,900 acre-feet Apr. 27, 28, 1922, Apr. 24, 1932 (gage height, 30.18 feet); minimum observed, 5,390 acre-feet Oct. 22, 1924.

**Remarks.**— Reservoir is formed by two earth embankments; dams were completed and storage began in 1908. Capacity, 177,150 acre-feet, between gage heights 0.0 foot (sill of outlet gates) and 30.0 feet (maximum operating level). Dead storage about 13,000 acre-feet. Below gage height 12.0 feet reservoir divides into two pools. In addition to water received from local drainage, reservoir receives water from Boise River through New York canal of Boise project. Water is used for irrigation of lower project lands. Figures given herein represent usable contents. Gage read once daily.

**Cooperation.**— Gage-height record and capacity table furnished by Board of Control for Boise project.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28,000	35,710	58,520	90,030	99,320	123,900	158,100	162,900	152,900	165,300	109,600	69,910
2	28,480	36,030	60,560	89,980	99,320	125,200	160,700	161,100	154,000	164,000	108,300	69,270
3	29,170	36,230	62,700	89,890	99,320	126,300	163,000	159,600	155,700	162,100	107,000	68,640
4	29,610	36,360	64,860	89,750	99,320	127,500	165,100	158,000	157,300	161,100	105,200	67,870
5	30,060	36,440	67,240	89,750	99,320	128,400	167,400	156,800	159,000	159,600	103,400	67,050
6	30,580	36,560	69,590	89,680	90,170	129,300	169,800	155,100	160,900	157,900	101,800	66,240
7	31,180	36,660	70,230	89,750	91,100	130,300	171,900	153,800	162,400	155,900	99,900	65,300
8	31,910	36,980	71,330	89,680	92,960	132,100	173,500	152,700	165,200	153,700	97,980	64,420
9	32,390	37,040	73,340	89,610	94,770	133,400	174,600	152,200	167,200	151,500	96,010	63,570
10	32,960	37,160	75,640	89,610	96,890	134,800	175,400	152,200	169,300	149,100	94,190	63,190
11	33,010	37,200	77,900	89,610	98,940	136,000	175,900	152,400	171,800	146,700	92,680	62,390
12	32,860	37,380	80,120	89,600	100,900	137,700	176,200	152,500	174,200	144,700	90,890	61,780
13	32,700	37,530	82,230	89,460	102,700	139,800	176,300	152,600	176,100	142,600	89,540	61,110
14	32,550	37,650	84,220	89,460	104,200	142,000	176,900	152,800	177,300	140,300	88,340	60,620
15	32,180	37,770	86,300	89,610	106,600	143,900	177,200	153,000	177,400	138,200	87,070	60,080
16	32,040	37,890	88,340	89,610	107,100	145,800	177,100	153,700	177,600	136,000	86,230	59,420
17	32,040	38,000	90,240	89,610	108,700	146,900	177,200	154,800	177,400	134,000	85,610	58,700
18	31,880	38,070	90,530	89,460	110,000	146,700	177,600	155,400	177,400	131,700	84,840	58,280
19	31,680	38,200	90,390	89,460	111,100	146,500	178,000	156,200	177,400	130,100	84,080	57,690
20	31,420	38,390	90,240	89,460	112,500	146,100	178,100	157,000	176,600	128,100	83,320	57,210
21	31,420	38,590	90,170	89,460	113,900	145,800	178,100	157,300	176,200	126,200	82,230	56,680
22	31,310	38,680	90,240	89,390	115,100	145,500	177,700	157,300	176,500	124,400	81,140	56,390
23	31,780	38,810	90,170	89,390	116,400	145,000	176,600	156,800	176,900	122,500	80,250	56,390
24	31,980	41,040	90,320	89,390	117,700	144,600	175,000	155,800	176,300	120,600	78,840	56,160
25	32,390	43,440	90,320	89,390	119,200	145,100	173,400	155,000	175,100	119,000	77,900	55,690
26	33,470	46,040	90,320	89,390	120,400	147,100	171,700	154,100	173,400	117,600	76,830	55,340
27	34,370	48,540	90,320	89,390	121,700	148,900	170,300	153,400	170,600	115,800	75,700	54,760
28	34,740	51,270	90,320	89,390	122,800	150,200	168,500	152,600	169,600	114,800	74,390	53,830
29	35,020	53,780	90,170	89,320	-	152,000	166,700	152,100	168,300	113,200	73,400	53,260
30	35,280	56,390	90,170	89,320	-	153,700	164,900	151,400	166,700	112,100	72,170	52,570
31	35,540	-	90,170	89,320	-	155,500	-	152,100	-	110,600	70,940	-

Monthly gage height and contents, water year October 1940 to September 1941

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	{Upper} 8.86 {Lower} 8.72	27,740	-
Oct. 31.....	{Upper} 10.54 {Lower} 10.45	35,540	+7,800
Nov. 30.....	14.40	56,390	+20,850
Dec. 31.....	19.60	90,170	+33,780
Calendar year 1940....	-	-	+4,080
Jan. 31.....	19.43	89,320	-850
Feb. 28.....	23.89	122,800	+33,480
Mar. 31.....	27.70	155,500	+32,700
Apr. 30.....	28.72	164,900	+9,400
May 31.....	27.32	152,100	-12,800
June 30.....	28.91	166,700	+14,600
July 31.....	22.35	110,600	-56,100
Aug. 31.....	16.76	70,940	-39,660
Sept. 30.....	13.74	52,570	-18,370
Water year 1940-41....	-	-	+24,830

## Malheur River near Drewsey, Oreg.

Location.- Water-stage recorder, lat. 43°47', long. 118°20', in SE¼ sec. 31, T. 20 S., R. 36 E., 300 feet downstream from crossing of Burns-Ontario highway, half a mile downstream from Cottonwood Creek, and 3 miles southeast of Drewsey. Datum of gage is 3,479.29 feet above mean sea level, datum of 1929.

Drainage area.- 982 square miles.

Records available.- June to December 1920, April to September 1921, June 1939 to September 1941. April to September 1923 and June 1926 to June 1939, at site 7 miles downstream.

Average discharge.- 15 years (1926-41), 141 second-feet.

Extremes.- Maximum discharge during year, 3,100 second-feet Mar. 2 (gage height, 10.02 feet); minimum, 5.2 second-feet Aug. 18, 19.

1920-21, 1923, 1926-41: Maximum discharge, 4,290 second-feet Feb. 27, 1940 (gage height, 11.35 feet), from rating curve extended above 2,500 second-feet; no flow at times.

Remarks.- Records fair. Several small diversions above station for irrigation.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 - 26

Oct. 27 to Sept. 30

3.2	32	2.6	4.5	4.0	193	7.0	1,230
3.4	57	2.8	13	4.5	310	8.0	1,730
3.6	89	3.0	30	5.0	450	9.1	2,420
		3.2	66	5.5	610		
		3.6	114	6.0	790		

Discharge, in second-feet, water year October 1941 to September 1942

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	148	94	127	107	2,310	1,270	558	322	76	21	22
2	44	315	59	b114	104	2,400	1,360	740	235	55	21	26
3	60	197	84	b89	b100	2,040	1,190	768	191	41	20	28
4	53	142	83	76	b95	1,500	1,110	762	193	56	15	39
5	45	106	78	83	b95	1,200	1,630	680	170	51	16	39
6	39	94	76	b94	b98	1,480	1,290	603	168	49	15	36
7	40	94	76	97	102	1,340	1,040	537	264	46	12	38
8	37	107	66	94	106	1,400	992	517	305	43	12	33
9	32	102	66	91	109	1,640	1,000	517	239	32	12	33
10	29	94	b60	b87	125	1,400	1,160	441	204	27	12	32
11	29	84	b52	b81	267	1,230	1,120	396	180	19	13	32
12	29	84	b44	b78	376	1,180	924	379	165	19	19	33
13	29	66	38	75	265	978	902	411	150	19	27	38
14	29	62	31	78	180	715	915	486	142	19	16	36
15	26	69	28	80	146	680	884	435	140	18	11	32
16	26	72	31	81	119	942	842	370	125	15	8.0	36
17	27	78	31	76	114	1,360	726	338	118	16	8.0	53
18	28	76	37	72	114	1,700	648	315	125	19	6.6	22
19	29	65	43	76	132	1,570	586	298	162	19	6.6	24
20	28	58	54	80	238	1,240	524	255	160	19	14	25
21	29	b50	78	81	340	1,050	492	224	125	17	14	26
22	20	b51	164	81	338	1,000	465	200	104	16	12	27
23	33	b55	316	83	461	1,040	460	178	84	15	12	26
24	40	60	600	86	1,110	924	459	162	69	16	15	26
25	52	68	260	91	858	938	456	174	65	16	16	23
26	98	68	170	387	414	1,090	463	193	68	17	17	22
27	231	83	680	267	540	1,170	459	136	72	18	19	21
28	128	66	392	189	1,020	1,310	453	178	75	19	23	20
29	114	78	202	146	-	1,360	432	195	51	20	23	18
30	150	89	168	116	-	1,330	435	220	78	21	24	19
31	118	-	132	114	-	1,220	-	325	-	21	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,745	231	26	56.3	3,460
November.....	2,761	315	50	92.0	5,480
December.....	4,322	680	28	139	8,570
Calendar year 1940.....	77,036.6	3,660	1.2	210	152,800
January.....	3,340	367	72	108	6,620
February.....	7,863	1,110	95	281	15,600
March.....	40,737	2,400	680	1,314	80,800
April.....	24,677	1,630	432	825	49,950
May.....	12,032	766	162	388	23,870
June.....	4,553	322	65	152	9,030
July.....	882	76	15	28.5	1,750
August.....	478.2	24	6.6	16.4	948
September.....	862	39	18	28.7	1,710
Water year 1940-41.....	104,252.2	2,400	6.6	286	206,800

Peak discharge.- Jan. 26 (3:30 a.m.) 1,020 sec.-ft.; Feb. 24 (11 p.m.) 1,670 sec.-ft.; Mar. 2 (2:30 a.m.) 3,190 sec.-ft.; Mar. 18 (6 p.m.) 1,970 sec.-ft.; Apr. 5 (6 p.m.) 1,320 sec.-ft.

b Stage-discharge relation affected by ice.

Malheur River below Warm Springs Reservoir, near Riverside, Oreg.

Location.- Hook gage, lat. 43°34', long. 118°12', in SW¼ sec. 17, T. 23 S., R. 37 E., 1 mile downstream from Warm Springs Dam, 3 miles upstream from South Fork, and 4 miles northwest of Riverside.

Drainage area.- 1,100 square miles.

Records available.- December 1914 to July 1917, March 1919 to September 1941. January 1906 to March 1907 and December 1908 to September 1910 at site at Riverside, 4 miles downstream, in reports of Geological Survey. October 1910 to November 1914 at site at Riverside, in reports of State engineer.

Average discharge.- 29 years (1909-16, 1919-41), 164 second-feet.

Extremes.- Maximum discharge observed during year, 1,500 second-feet Mar. 20-23 (gage height, 6.88 feet); no flow Oct. 1 to Mar. 1.  
1906-7, 1908-17, 1919-41: Maximum discharge observed, 5,490 second-feet Mar. 2, 1910; no flow at times.

Remarks.- Records good. Several small diversions above station for irrigation. Flow completely regulated since November 1919 by Warm Springs Dam. Gage read once daily.

Rating tables, water year 1940-41, (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Mar. 14				Mar. 15. to Sept. 30			
2.7	0	3.4	26	3.7	63	4.5	290
2.8	1.0	3.7	63	3.9	102	5.0	515
3.0	5.3	4.0	130	4.2	180	5.5	760
3.2	13						

Note.- Same as preceding table below  
3.7 feet.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	40	497	156	258	198	254
2						4	48	488	187	208	218	246
3						11	65	635	194	194	250	229
4						11	138	670	194	184	260	218
5						11	492	705	190	197	355	218
6						11	1,240	650	174	155	416	218
7						11	1,340	610	201	153	438	218
8						11	1,300	575	215	184	443	218
9						11	1,180	542	215	246	438	218
10						13	1,100	502	212	274	438	229
11						12	992	470	215	290	371	254
12						12	840	425	198	312	407	266
13						12	715	454	198	328	438	266
14						118	715	443	165	330	430	266
15						275	745	452	174	344	412	266
16						470	795	425	165	353	376	266
17						660	765	394	184	353	358	266
18						1,090	710	369	226	353	358	258
19						1,420	650	358	226	340	335	246
20						1,470	585	299	232	294	304	246
21						1,500	542	299	254	270	290	246
22						1,500	506	308	254	270	282	246
23						1,420	488	308	254	286	282	226
24						1,330	466	304	411	278	282	198
25						1,250	452	290	484	270	282	198
26						1,170	443	265	380	254	282	204
27						1,160	443	243	380	243	274	212
28						1,160	438	232	353	204	254	212
29						1,160	438	212	330	168	254	212
30						1,160	438	189	312	156	254	212
31						829	-	125	-	156	254	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0	0	0
November.....						0	0	0	0	0	0	0
December.....						0	0	0	0	0	0	0
Calendar year 1940.....						59,681	632	0	163	118,400		
January.....						0	0	0	0	0	0	0
February.....						0	0	0	0	0	0	0
March.....						19,272	1,500	0	622	38,230		
April.....						19,089	1,340	40	636	37,860		
May.....						12,709	705	125	410	25,210		
June.....						7,333	484	156	244	14,840		
July.....						7,891	353	153	255	15,650		
August.....						10,221	443	198	330	20,270		
September.....						7,032	286	198	234	13,950		
Water year 1940-41.....						83,547	1,500	0	229	165,700		

## Malheur River near Hope, Oreg.

Location.- Water-stage recorder, lat. 43°57', long. 117°29', in SW $\frac{1}{4}$  sec. 5, T. 19 S., R. 43 E., half a mile upstream from intake of Vines canal and 6 $\frac{1}{2}$  miles west of Hope.

Drainage area.- 3,030 square miles.

Records available.- May 1919 to September 1941 (incomplete prior to October 1922).

Average discharge.- 18 years (1922-25, 1926-41), 208 second-feet.

Extremes.- Maximum discharge during year, 3,260 second-feet Mar. 1 (gage height, 5.12 feet); minimum, 22 second-feet Oct. 15, 16, Jan. 11.  
1919-41: Maximum discharge, 8,100 second-feet Feb. 5, 1925 (gage height, 8.1 feet), from rating curve extended above 3,000 second-feet; minimum, 3.5 second-feet Sept. 2, 1919 (gage height, 0.02 foot).  
The two greatest floods known occurred in March 1894 and March 1910.

Remarks.- Records good except those for periods of ice effect, which are fair. Vale-Oregon canal diverts at Namorf; no other large diversions above station but many small ones. Flow regulated by Warm Springs Reservoir and Agency Valley Reservoir (see following page).

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used May 29 to Sept. 30)

0.6	22	1.6	199	3.0	945
.8	38	1.9	312	3.5	1,370
1.0	62	2.2	455	4.0	1,850
1.3	116	2.6	675	4.7	2,710

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	h40	165	57	b75	135	2,690	1,640	356	123	248	110	87
2	h37	260	56	b60	121	2,340	998	495	143	241	94	104
3	h38	233	56	b60	108	1,560	740	863	168	196	85	121
4	h31	196	56	b44	100	1,150	746	861	202	177	78	104
5	h28	165	56	b48	98	960	512	1,000	187	177	70	87
6	h28	140	53	b58	98	960	1,510	990	165	174	70	85
7	h31	128	53	b62	112	889	2,040	903	177	174	87	87
8	h29	121	53	b60	121	910	2,050	779	190	168	128	87
9	h28	106	52	b58	128	960	1,890	682	154	146	133	89
10	h29	94	47	70	241	861	1,680	551	116	135	140	87
11	h28	89	b43	61	833	840	1,640	571	106	140	148	87
12	h26	82	b38	59	1,860	826	1,600	495	100	140	171	94
13	h26	73	b35	b62	1,150	812	1,490	455	91	140	92	121
14	h24	68	b35	b67	615	805	1,320	455	85	140	118	128
15	h22	65	b35	b70	430	792	1,320	475	87	140	143	135
16	22	62	b35	b70	330	990	1,360	470	89	138	135	128
17	23	61	b38	b73	279	1,240	1,350	435	89	138	128	128
18	23	61	b42	b76	241	1,470	1,310	400	61	135	91	133
19	23	59	b47	80	256	1,860	1,170	357	106	135	94	133
20	28	58	b62	76	465	2,070	968	283	108	133	92	116
21	28	56	b60	76	819	2,050	847	209	108	138	99	118
22	28	64	b65	76	1,036	2,110	723	171	108	135	79	126
23	28	60	76	76	1,260	2,690	638	174	108	130	68	130
24	36	47	73	65	2,350	2,000	544	168	108	128	67	126
25	73	56	82	92	2,100	1,870	516	190	112	128	68	94
26	83	55	80	b100	889	1,840	522	165	168	126	68	78
27	480	58	78	b110	621	1,810	527	154	116	123	64	80
28	216	58	106	b122	916	1,810	506	160	250	128	62	87
29	190	58	121	b135	-	1,890	440	171	248	128	63	81
30	155	57	110	b135	-	1,870	386	168	248	121	61	80
31	171	-	87	140	-	1,950	-	154	-	121	68	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						2,062	480	22	66.5	4,090		
November.....						2,856	280	47	95.2	5,560		
December.....						1,876	121	35	60.5	3,720		
Calendar year 1940.....						86,539	3,920	22	236	171,600		
January.....						2,431	140	44	78.4	4,820		
February.....						17,694	2,350	98	632	35,100		
March.....						46,275	2,690	792	1,493	91,790		
April.....						33,274	2,050	396	1,109	66,000		
May.....						13,888	1,000	184	441	27,150		
June.....						4,251	248	85	141	8,590		
July.....						4,621	248	121	149	9,170		
August.....						2,947	171	53	95.1	5,850		
September.....						3,151	135	80	106	6,250		
Water year 1940-41.....						135,104	2,690	22	370	268,000		

Peak discharge.- Feb. 25 (4 a.m.) 2,830 sec.-ft.; Mar. 1 (9 a.m.) 3,260 sec.-ft.; Mar. 2 (4:30 a.m.) 3,180 sec.-ft.

b Stage-discharge relation affected by ice.

c Computed from staff-gage reading.



## Reservoirs in Malheur River Basin, Oreg.

**Warm Springs Reservoir.**—Tape gage, lat. 43°35', long. 118°12', in SE¼ sec. 8, T. 23 S., R. 37 E., at dam on Malheur River, 4 miles upstream from South Fork of Malheur River and 4 miles northwest of Riverside. Datum of gage is 3,327 feet above mean sea level (surveys of Bureau of Reclamation); gage readings have been reduced to elevations above mean sea level. Drainage area, 1,100 square miles. Records available, January 1920 to September 1941. Maximum contents observed during year, 194,400 acre-feet Apr. 26 (elevation 3,406.95 feet); minimum observed, 86,580 acre-feet Oct. 1, 2 (elevation, 3,379.40 feet). Maximum contents observed during period 1920-41, that of Apr. 6, 1941; no storage Sept. 18 to Nov. 1, 1929, Aug. 26 to sometime in November 1935.

Reservoir is formed by concrete arch dam; storage began in 1919. Capacity, 190,000 acre-feet between elevations 3,327 feet (bottom of outlet tunnel) and 3,406 feet (top of 5-foot flashboards). Dead storage, 1,400 acre-feet below elevation 3,327 feet. In 1926 a half interest in reservoir was purchased by the Federal Government for Vale project of Bureau of Reclamation. Capacity table and daily gage readings furnished by Bureau of Reclamation. Water used to irrigate lands on both sides of river between Namoff and Ontario.

**Agency Valley Reservoir.**—Pressure gage with mercury column, lat. 43°55', long. 118°09', in SW¼ sec. 15, T. 19 S., R. 37 E., at dam on North Fork of Malheur River, a quarter of a mile northwest of Beulah. Gage readings are elevations above mean sea level by original surveys of Bureau of Reclamation, or 7.72 feet less than elevations above mean sea level, datum of 1929. Drainage area, 420 square miles. Records available, December 1935, when storage began, to September 1941. Maximum contents observed during year, 62,770 acre-feet May 3 (elevation, 3,341.50 feet); minimum observed, 29,810 acre-feet Oct. 1 (elevation, 3,321.20 feet). Maximum contents during period 1935-41, that of May 3, 1941; minimum observed since full capacity was attained on Apr. 9, 1938, 29,410 acre-feet Sept. 18, 1940.

Reservoir is formed by earthfill rock-faced dam; storage began in 1935. Capacity 59,920 acre-feet between elevations 3,263.21 feet (bottom of outlet tunnel) and 3,340 feet (top of 17-foot spillway gates); with gates lowered the capacity is 32,220 acre-feet. No dead storage. Water is used for irrigation of lands below Juntura, on Vale project of Bureau of Reclamation. Capacity table and daily gage readings furnished by Bureau of Reclamation.

**Other reservoirs.**—There are several other reservoirs in the Malheur River Basin, all with less than 3,500 acre-feet capacity except Willow Creek No. 3 Reservoir near Malheur, which has a capacity of 49,000 acre-feet.

Monthly elevation and contents, water year October 1940 to September 1941

Month	Warm Springs Reservoir			Agency Valley Reservoir		
	Elevation (feet)	Contents (acre- feet)	Change in contents during month (acre- feet)	Elevation (feet)	Contents (acre- feet)	Change in contents during month (acre- feet)
Sept. 30.....	3,379.35	86,420	-	3,321.15	29,740	-
Oct. 31.....	3,380.50	92,100	+5,680	3,322.65	31,750	+2,010
Nov. 30.....	3,382.18	97,590	+5,490	3,325.55	35,820	+4,070
Dec. 31.....	3,384.86	106,500	+8,910	3,328.55	40,300	+4,480
Calendar year 1940.....	-	-	+36,020	-	-	+2,420
Jan. 31.....	3,397.06	114,000	+7,500	3,331.35	44,690	+4,390
Feb. 28.....	3,392.30	132,900	+18,900	3,335.05	50,910	+6,220
Mar. 31.....	3,404.10	181,400	+48,500	3,339.50	58,980	+8,070
Apr. 30.....	3,406.53	192,400	+11,000	3,340.65	61,540	+2,560
May 31.....	3,406.12	190,600	-1,800	3,340.15	60,200	-1,340
June 30.....	3,404.86	184,900	-5,700	3,336.30	53,120	-7,080
July 31.....	3,401.04	168,200	-16,700	3,323.80	33,330	-19,790
Aug. 31.....	3,395.72	146,300	-21,900	3,322.80	31,950	-1,380
Sept. 30.....	3,392.10	132,200	-14,100	3,322.45	31,450	-500
Water year 1940-41.....	-	-	+43,780	-	-	+1,710

North Fork of Malheur River above Agency Valley Reservoir, near Beulah, Oreg.

Location.- Water-stage recorder, lat. 43°58', long. 118°11', in sec. 33, T. 18 S., R. 37 E., at M. W. Scott's Ranch, about 3 miles upstream from Warm Springs Creek and 4 miles northwest of Agency Valley Dam and Beulah.

Records available.- January to September 1914, June 1936 to September 1941.

Extremes.- Maximum discharge during year, 944 second-feet Apr. 4 (gage height, 4.44 feet); minimum, 24 second-feet Dec. 13 (gage height, 0.18 foot).

1914, 1936-41: Maximum discharge recorded, 975 second-feet Mar. 26, 1940 (gage height, 4.60 feet); minimum, 19 second-feet Aug. 5, 1939.

Remarks.- Records good except those for periods of shifting control or no gage-height record, which are fair, and those for periods of ice effect, which are poor. A few small diversions above station for irrigation; no regulation.

Rating tables, water year 1940-41, except periods of ice effect or shifting control (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 4

Apr. 5 to Sept. 30

0.8	25	2.2	265	0.7	41	1.9	240
1.0	43	2.5	341	.8	53	2.2	312
1.2	69	3.0	479	1.0	80	2.5	391
1.4	99	3.5	625	1.2	109	3.0	529
1.6	134	4.0	775	1.4	140	3.8	765
1.9	195			1.6	177		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	101	62	53	78	426	733	627	212	96	47	53
2	71	140	60	42	65	401	700	657	195	90	45	60
3	62	85	59	b43	59	352	664	654	205	88	45	62
4	63	63	58	b50	56	312	724	589	187	81	43	60
5	48	63	59	b60	58	300	759	561	177	77	42	57
6	44	59	59	b70	63	295	645	501	189	76	43	53
7	43	63	55	b75	74	328	603	469	252	76	46	52
8	43	70	58	b80	65	387	589	461	214	74	46	62
9	43	60	60	82	68	412	663	402	197	69	45	a52
10	42	51	45	85	72	379	669	378	168	67	45	a53
11	42	53	31	82	78	382	574	359	168	66	56	53
12	41	50	30	80	83	357	546	407	154	63	67	56
13	41	56	31	83	70	302	574	501	145	62	49	56
14	40	62	b33	93	74	255	577	473	149	61	47	56
15	40	60	b37	91	63	288	592	418	149	60	46	54
16	39	63	b42	91	60	382	537	378	142	58	45	52
17	39	74	b50	87	67	499	490	351	153	61	45	51
18	39	67	b58	82	70	580	445	333	153	69	62	53
19	41	50	*b58	60	78	502	413	302	156	69	63	56
20	41	b42	b78	a52	82	440	396	268	130	66	56	57
21	41	b43	b93	a48	88	420	386	249	112	67	53	57
22	43	45	106	a48	91	434	394	238	104	65	53	54
23	43	49	169	a52	109	429	402	231	97	58	52	53
24	58	55	136	62	177	451	413	240	102	53	51	53
25	53	54	93	91	129	514	413	268	109	53	57	52
26	72	43	80	102	96	563	421	249	108	49	60	51
27	91	50	144	67	104	652	415	236	106	47	60	51
28	64	60	77	62	286	736	407	231	110	48	68	51
29	68	70	70	63	-	754	415	236	114	56	54	51
30	67	70	77	68	-	730	432	225	102	49	56	51
31	67	-	65	74	-	727	-	236	-	47	54	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							1,594	91	39	51.4	3,160	
November.....							1,871	140	42	62.4	3,710	
December.....							2,145	169	30	69.2	4,250	
Calendar year 1940.....							42,484	823	-	116	84,270	
January.....							2,177	102	42	70.2	4,320	
February.....							2,462	286	55	87.9	4,880	
March.....							13,979	754	265	451	27,730	
April.....							15,991	759	386	533	31,720	
May.....							11,690	657	225	377	23,190	
June.....							4,559	252	97	152	9,040	
July.....							2,021	96	47	65.2	4,010	
August.....							1,591	67	42	51.3	3,160	
September.....							1,622	62	51	54.1	3,220	
Water year 1940-41.....							61,702	759	30	169	122,400	

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Agency Valley Reservoir and Malheur River near Drewsey.

b Stage-discharge relation affected by ice.

Note.- Shifting-control method used Dec. 24 to Apr. 4.

## North Fork of Malheur River at Beulah, Oreg.

Location.- Staff gage, lat. 43°54', long. 118°09', in NE¼ sec. 22, T. 19 S., R. 37 E., at Beulah, a quarter of a mile downstream from Agency Valley Dam and 12 miles northwest of Juntura.

Drainage area.- 420 square miles.

Records available.- January 1936 to September 1941. March 1909 to June 1912 and November 1913 to July 1914, at site 6 miles downstream. June 1926 to December 1935, at site three-quarters of a mile downstream, below intakes of two canals with combined capacity of about 10 second-feet.

Extremes.- Maximum discharge observed during year, 940 second-feet Apr. 5, 6 (gage height, 4.80 feet); no flow at times.

1909-12, 1913-14, 1926-41: Maximum discharge, 5,910 second-feet Mar. 20, 1910; minimum prior to construction of dam, 5 second-feet Dec. 28, 1910, Jan. 26, 27, 1911.

Remarks.- Records good except those for period Oct. 27 to Feb. 22, which are poor. Flow regulated by Agency Valley Reservoir (see p. 155). Small diversions above station for irrigation; practically entire summer flow is diverted below station and above Juntura.

Rating tables, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 19				Feb. 23 to Sept. 30			
0.2	1.5	1.0	34	0.4	0.9	1.6	707
.4	6	1.2	49	.6	9.0	2.0	845
.6	12	1.5	76	.8	20	2.5	940
.8	21			1.0	37	3.0	460
				1.3	72	3.5	676

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	0				15	767	362	326	375	290	49
2	34	0				198	445	576	290	375	174	49
3	34	0				283	602	748	278	375	106	49
4	16	14				283	675	707	231	375	106	49
5	16	16				283	940	680	231	376	47	49
6	3.5	18				324	940	641	278	375	47	49
7	3.1					331	811	550	266	375	47	49
8	1.5					356	694	438	170	375	47	49
9	7.8					400	671	438	126	375	47	49
10	7.8		1.2			456	641	425	126	375	47	49
11	7.8				0.7	482	641	375	80	375	47	49
12	7.8					568	633	375	80	375	47	49
13	16					568	628	400	129	375	47	49
14	16					568	623	425	129	375	47	49
15	49					568	623	425	213	375	47	49
16	49			1.0		568	620	420	238	375	47	49
17	70					568	612	405	288	375	47	49
18	62	1.0				602	462	392	324	375	47	49
19	62		1.5			602	304	370	324	375	47	49
20	62					651	314	350	324	375	47	49
21	62					628	319	307	324	375	47	49
22	62					628	326	326	324	375	47	49
23	62				.7	628	302	326	324	375	47	49
24	27				.8	597	319	326	345	375	47	49
25	27			1.3	.8	592	338	326	345	375	47	49
26	9				7.0	592	355	326	375	375	47	49
27	0				16	691	358	326	375	375	47	55
28	0				15	691	352	326	375	375	47	47
29	0				-	761	368	326	375	375	47	47
30	0				-	823	278	326	375	375	49	47
31	0				-	761	-	326	-	290	49	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	798.3	70	0	25.8	1,580
November.....	72.0	18	0	2.40	143
December.....	38.7	-	-	1.25	77
Calendar year 1940.....	46,941.5	1,360	0	128	93,100
January.....	31.0	-	-	1.00	61
February.....	54.7	15	-	1.95	108
March.....	16,064	828	15	618	31,860
April.....	15,311	940	278	627	31,360
May.....	13,069	748	307	422	25,920
June.....	7,966	375	60	266	15,840
July.....	11,640	375	290	372	22,690
August.....	1,949	290	47	62.9	3,870
September.....	1,468	53	47	48.9	2,910
Water year 1940-41.....	66,881.7	940	0	189	136,600

Notes.- No gage-height record Oct. 27 to Nov. 3, Nov. 6 to Dec. 18, Dec. 20 to Feb. 22, Feb. 24; discharge computed on basis of 2 discharge measurements (Dec. 19, Feb. 23) and notes by gage observer.

## South Fork of Payette River at Lowman, Idaho

Location.- Staff gage, lat. 44°05', long. 115°37'30", in SW $\frac{1}{4}$  sec. 27, T. 9 N., R. 7 E., half a mile upstream from Rock Creek, half a mile west of Lowman post office, and four-fifths of a mile downstream from Clear Creek.

Drainage area.- 456 square miles.

Records available.- May to September 1941.

Extremes.- Maximum discharge observed during period, 3,580 second-feet May 26 (gage height, 4.02 feet); minimum observed, 347 second-feet Sept. 25-30 (gage height, 0.72 foot).

Remarks.- Records good. No regulation. Several small diversions for irrigation and placing, the return flow from which enters river above station. Gage read twice daily.

Rating table, May 10 to Sept. 30, 1941 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used July 6-24, Aug. 28-29)

0.7	341	1.7	808	3.0	2,080
.9	400	2.0	1,045	3.4	2,620
1.1	472	2.3	1,320	3.9	3,410
1.4	616	2.6	1,620		

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	2,080	1,040	506	391
2								-	1,960	1,040	489	417
3								-	2,080	1,000	481	420
4								-	2,080	1,000	468	403
5								-	1,960	961	461	394
6								-	1,960	922	438	388
7								-	2,080	882	434	378
8								-	2,210	882	438	376
9								-	1,960	846	506	372
10								961	1,840	808	489	365
11								1,040	1,960	774	498	361
12								1,750	1,960	774	707	431
13								2,340	2,210	759	553	394
14								2,210	2,480	739	502	378
15								1,840	2,210	707	486	376
16								1,620	2,080	669	489	375
17								1,750	1,960	667	472	368
18								1,840	1,840	634	584	366
19								1,620	2,080	554	584	364
20								1,620	1,840	611	526	378
21								1,620	1,620	595	515	369
22								1,960	1,620	584	494	363
23								2,340	1,620	563	476	368
24								2,770	1,620	563	472	366
25								2,920	1,420	563	467	349
26								3,410	1,390	628	445	347
27								3,240	1,270	595	449	347
28								2,620	1,220	590	434	347
29								2,340	1,180	563	424	349
30								2,210	1,090	539	417	347
31								2,210	-	511	407	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....							
November.....							
December.....							
Calendar year .....							
January.....	-	-	-	-	-	-	-
February.....	-	-	-	-	-	-	-
March.....	-	-	-	-	-	-	-
April.....	-	-	-	-	-	-	-
May 10-31 .....	46,191	3,410	961	2,100	4.61	3.77	91,620
June.....	54,710	2,480	1,090	1,824	4.00	4.46	108,600
July.....	22,612	1,040	511	729	1.60	1.84	44,860
August.....	15,099	707	407	487	1.07	1.23	29,860
September.....	11,235	420	347	374	.620	.91	22,290
The period .....	-	-	-	-	-	-	297,200

## South Fork of Payette River near Garden Valley, Idaho

Location.- Water-stage recorder, lat. 44°04', long. 115°56', in sec. 1, T. 8 N., R. 4 E., at Garden Valley ranger station, 300 feet upstream from Station Creek, 2.7 miles south-east of Garden Valley, and 5.9 miles upstream from Middle Fork of Payette River.

Drainage area.- 779 square miles.

Records available.- May 1921 to September 1941.

Average discharge.- 17 years (1924-41), 1,146 second-feet.

Extremes.- Maximum discharges during year, 4,540 second-feet May 27 (gage height, 5.02 feet); minimum daily, 250 second-feet Dec. 13, 14.  
1921-41: Maximum discharge observed, 10,600 second-feet May 26, 1923 (gage height, 8.0 feet); minimum discharge, 75 second-feet Dec. 15, 1935, Jan. 26, 1936 (gage height, 0.70 foot), from rating curve extended below 280 second-feet; minimum daily, 217 second-feet Jan. 26, 1936.

Remarks.- Records excellent except those for periods of ice effect or no gage-height record, which are good. Few diversions above station. Since Nov. 2, 1930, flow has been regulated by Deadwood Reservoir (see p. 165). Slight regulation by Grimes Pass power plant.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.2	225	2.4	1,010	3.8	2,630
1.5	376	2.7	1,290	4.2	3,200
1.8	555	3.0	1,610	4.6	3,840
2.1	765	3.4	2,100	5.0	4,540

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	662	765	536	364	424	562	1,010	1,970	3,430	1,610	698	942
2	705	845	510	b325	448	627	1,080	1,970	3,200	1,500	845	959
3	901	977	496	b300	414	607	1,160	2,100	3,280	1,500	768	976
4	705	813	496	b400	397	562	1,060	2,230	3,360	1,440	594	950
5	634	765	490	442	402	556	1,100	2,300	3,280	1,390	641	909
6	588	765	496	454	430	536	1,020	2,160	3,200	1,340	742	885
7	548	568	478	448	478	529	976	1,970	3,280	1,290	959	837
8	542	594	460	419	442	536	950	1,910	3,590	1,240	698	837
9	522	588	466	397	442	562	959	1,850	3,350	1,200	676	829
10	503	548	375	386	464	555	1,060	1,850	3,120	1,150	712	837
11	510	522	353	380	484	568	1,060	2,040	3,050	1,150	773	869
12	490	466	b300	402	522	562	1,050	2,700	3,120	1,240	1,050	934
13	478	386	b250	402	478	562	1,090	3,510	3,280	1,150	885	917
14	478	448	b250	*448	460	516	1,090	3,430	3,430	1,150	641	901
15	472	510	b500	430	442	516	1,150	2,980	3,280	al,100	600	909
16	460	*503	b750	414	424	536	1,100	2,630	3,050	al,060	765	917
17	454	516	b775	402	414	562	1,050	2,560	2,840	al,020	676	909
18	442	536	b800	408	460	656	984	2,700	2,910	a900	821	885
19	436	490	b775	408	448	676	934	2,490	3,120	a950	728	877
20	430	460	750	408	430	683	909	2,360	2,910	a950	690	893
21	424	490	742	408	430	648	909	2,360	2,630	al,050	648	877
22	607	430	735	408	454	669	925	2,630	2,420	al,100	607	853
23	648	392	720	430	478	662	98*	3,050	2,360	al,100	594	845
24	669	442	620	402	503	648	1,070	3,430	2,300	1,030	669	728
25	909	503	490	430	503	662	1,160	3,670	2,160	1,000	669	683
26	789	442	454	460	460	720	1,240	4,010	1,970	885	669	683
27	765	442	496	414	460	773	1,340	4,270	1,910	877	669	683
28	765	466	472	380	478	829	1,500	3,670	1,850	813	662	683
29	750	600	424	380	-	893	1,610	3,280	1,790	735	750	712
30	750	620	448	397	-	993	1,790	3,200	1,670	669	821	720
31	758	-	442	402	-	993	-	3,350	-	641	950	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						18,794	909	424	606	37,280		
November.....						16,792	877	386	560	33,310		
December.....						16,349	800	250	527	32,430		
Calendar year 1940.....						446,250	4,450	250	1,219	885,100		
January.....						12,548	460	300	405	24,890		
February.....						12,659	522	397	452	25,110		
March.....						19,957	993	516	644	39,580		
April.....						33,300	1,790	909	1,110	66,050		
May.....						84,630	4,270	1,850	2,730	167,900		
June.....						85,130	3,590	1,670	2,888	168,900		
July.....						34,230	1,610	641	1,104	67,890		
August.....						22,660	1,050	594	731	44,950		
September.....						28,439	976	683	848	50,460		
Water year 1940-41.....						382,486	4,270	250	1,048	758,800		

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Deadwood River near Lowman, South Fork of Payette River near Banks, Payette River near Horseshoe Bend, and weather records.  
b Stage-discharge relation affected by ice.

## PAYETTE RIVER BASIN

South Fork of Payette River near Banks, Idaho

Location.- Water-stage recorder, lat. 44°05'30", long. 116°06', in sec. 28, T. 9 N., R. 3 E., 1 mile upstream from North Fork of Payette River and 1½ miles northeast of Banks. Datum of gage is 2,812.00 feet above mean sea level.

Drainage area.- 1,200 square miles.

Records available.- August 1921 to September 1941.

Average discharge.- 20 years, 1,537 second-feet.

Extremes.- Maximum discharge during year, 5,820 second-feet May 27 (gage height, 6.41 feet); minimum daily, 350 second-feet Dec. 13, 14.

1921-41: Maximum discharge, 13,800 second-feet May 17, 1927 (gage height, 10.6 feet, from floodmarks); minimum, about 225 second-feet Dec. 15, 1935, Jan. 26, 1936, and Dec. 26, 1939.

Remarks.- Records excellent except those for periods of ice effect, which are good.

Small diversions above station for irrigation. Since Nov. 2, 1930, flow has been regulated by Deadwood Reservoir (see p. 165). Slight regulation by Grimes Pass power plant.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.1	305	2.2	1,510	4.6	3,630
.4	435	2.6	1,810	5.0	4,070
.7	585	3.0	2,135	5.4	4,540
1.0	750	3.4	2,485	5.8	5,040
1.4	985	3.8	2,845	6.2	5,560
1.8	1,235	4.2	3,230	6.6	6,100

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	805	955	778	570	640	985	1,810	2,940	4,420	2,010	835	1,080
2	835	1,080	722	445	668	1,240	1,930	2,940	4,180	1,930	1,020	1,080
3	1,080	1,170	706	b460	612	1,170	2,050	3,230	4,070	1,850	925	1,140
4	895	1,040	700	b500	585	1,080	1,930	3,430	4,180	1,810	778	1,100
5	778	985	684	b650	580	1,040	2,050	3,430	4,070	1,730	778	1,040
6	728	985	700	678	612	1,020	1,890	3,330	3,960	1,660	835	1,040
7	684	805	668	656	728	985	1,770	2,940	4,180	1,580	1,140	985
8	668	865	640	629	684	985	1,690	2,940	4,780	1,540	865	955
9	656	835	646	580	673	985	1,890	2,940	4,420	1,480	835	955
10	629	778	535	560	700	985	1,890	2,840	4,070	1,400	865	955
11	629	734	412	570	778	985	1,890	3,130	3,850	1,370	925	985
12	612	668	b375	565	895	985	1,850	3,850	3,960	1,510	1,240	1,080
13	602	510	b350	585	805	955	1,890	5,040	4,070	1,400	1,100	1,040
14	590	590	b350	*640	750	895	1,930	5,170	4,180	1,370	835	1,020
15	580	*673	b600	629	722	865	1,970	4,540	3,960	1,340	778	1,040
16	580	673	b900	595	684	895	1,890	3,960	3,740	1,270	895	1,080
17	570	706	b1,000	580	662	925	1,770	3,860	3,530	1,240	835	1,040
18	560	744	b1,000	585	706	1,100	1,660	3,860	3,530	1,100	1,100	1,080
19	550	668	b1,000	590	700	1,140	1,540	3,530	3,850	1,140	955	985
20	560	607	b950	596	684	1,140	1,510	3,330	3,630	1,140	925	1,040
21	565	656	925	595	690	1,100	1,510	3,330	3,230	1,240	835	1,020
22	717	590	925	602	750	1,140	1,510	3,530	3,040	1,370	778	985
23	778	505	985	624	805	1,100	1,660	4,070	2,840	1,340	778	985
24	805	570	895	595	895	1,100	1,770	4,660	2,780	1,200	805	895
25	1,200	678	805	662	925	1,100	1,890	5,040	2,660	1,170	835	835
26	1,020	595	712	750	835	1,200	2,010	5,170	2,480	1,080	835	835
27	925	607	835	690	805	1,300	2,140	5,560	2,400	1,080	835	805
28	925	629	778	612	835	1,400	2,300	4,910	2,300	1,020	805	805
29	895	805	678	590	-	1,510	2,480	4,300	2,220	955	865	835
30	925	925	690	618	-	1,810	2,760	4,300	2,140	865	925	835
31	925	-	678	602	-	1,770	-	4,420	-	835	1,080	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	23,271	1,200	555	751	46,180
November.....	22,632	1,170	505	754	44,890
December.....	22,622	1,000	350	730	44,870
Calendar year 1940.....	627,521	6,380	350	1,715	1,245,000
January.....	18,596	750	445	600	36,880
February.....	20,408	925	580	729	40,480
March.....	34,860	1,810	865	1,125	69,140
April.....	56,630	2,760	1,510	1,888	112,300
May.....	120,500	5,560	2,840	3,887	239,000
June.....	106,700	4,780	2,140	3,567	211,600
July.....	42,025	2,010	835	1,356	85,360
August.....	27,840	1,240	778	898	55,220
September.....	29,495	1,140	805	935	58,500
Water year 1940-41.....	525,579	5,560	350	1,440	1,042,000

\* Winter discharge measurement made on this date.

b Stage-discharge relation affected by ice.

## Payette River near Horseshoe Bend, Idaho

Location.— Water-stage recorder, lat. 43°56', long. 116°11'30", in SW¼ sec. 14, T. 7 N., R. 2 E., 100 feet east of tracks of Idaho Northern branch of Oregon Short Line R. R. and 1½ miles north of Horseshoe Bend.

Drainage area.— 2,230 square miles.

Records available.— November 1912 to September 1916, July 1919 to September 1941. February 1906 to November 1912 at site 2 miles upstream, in sec. 2, T. 7 N., R. 2 E.

Average discharge.— 30 years (1907-15, 1919-41), 2,953 second-feet.

Extremes.— Maximum discharge during year, 10,300 second-feet May 27 (gauge height, 6.22 feet); minimum, 545 second-feet Dec. 14 (gauge height, 0.70 foot).  
1906-16, 1919-41: Maximum discharge, 22,100 second-feet June 9, 1921 (gauge height, 9.57 feet); minimum, 350 second-feet Dec. 17, 1935 (gauge height, 0.26 foot), from rating curve extended below 600 second-feet.

Remarks.— Records excellent. Flow regulated by Deadwood Reservoir (see p. 165), Payette Lake (see p. 168), and Lake Fork Reservoir (see p. 173). Several diversions from tributaries above station for irrigation.

Rating table, water 1940-41 (gauge height, in feet, and discharge, in second-feet)

0.7	545	2.0	1,790	3.6	4,310	5.2	7,740
1.0	770	2.4	2,310	4.0	5,090	5.6	8,720
1.3	1,030	2.8	2,910	4.4	5,920	6.0	9,740
1.6	1,350	3.2	3,670	4.8	6,810	6.4	10,850

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,210	1,520	1,620	967	1,040	1,610	4,310	5,500	9,220	3,400	1,620	1,520
2	1,250	1,770	1,470	786	1,080	1,980	4,500	5,600	8,720	3,320	1,760	1,520
3	1,550	1,980	1,340	714	1,040	2,100	4,790	6,030	8,470	3,150	1,680	1,670
4	1,430	1,910	1,360	818	985	2,100	4,690	6,280	8,470	2,990	1,640	1,540
5	1,500	1,740	1,320	1,030	985	2,100	5,090	6,580	8,280	2,750	1,460	1,480
6	1,250	1,660	1,320	1,070	1,010	2,040	4,790	6,580	7,980	2,680	1,620	1,450
7	1,150	1,510	1,290	1,060	1,150	1,980	4,220	6,140	8,470	2,520	1,850	1,370
8	1,090	1,620	1,230	1,010	1,110	1,980	3,930	6,560	9,220	2,310	1,690	1,350
9	1,060	1,750	1,210	940	1,100	2,040	3,930	6,360	8,720	2,240	1,520	1,340
10	1,000	1,630	1,060	904	1,150	2,040	4,400	6,140	7,980	2,100	1,640	1,330
11	967	1,530	770	886	1,290	1,980	4,790	6,360	7,500	1,980	1,610	1,340
12	958	1,370	662	859	1,430	1,980	4,500	7,270	7,270	2,040	1,980	1,410
13	931	1,040	615	886	1,340	1,910	4,400	8,970	6,810	1,980	1,910	1,380
14	904	967	601	976	1,240	1,850	4,400	9,740	6,580	1,850	1,650	1,370
15	904	1,150	815	976	1,200	1,790	4,500	9,480	6,360	1,790	1,460	1,370
16	904	1,280	1,100	931	1,160	1,790	4,310	9,480	6,140	1,740	1,500	1,420
17	868	1,350	1,260	913	1,130	1,910	3,930	9,220	5,820	1,780	1,460	1,400
18	842	1,460	1,470	915	1,180	2,310	3,870	8,970	5,820	1,690	1,780	1,350
19	826	1,330	1,520	922	1,160	2,600	3,320	8,470	6,580	1,670	1,500	1,310
20	834	1,250	1,520	931	1,150	2,600	3,150	7,740	6,810	1,670	1,640	1,340
21	850	1,250	1,510	940	1,150	2,520	3,070	7,500	6,810	1,720	1,440	1,330
22	976	1,160	1,520	958	1,230	2,520	3,070	7,270	6,810	1,850	1,370	1,310
23	1,100	1,070	1,590	994	1,310	2,450	3,230	7,740	6,360	1,850	1,320	1,310
24	1,150	1,080	1,520	966	1,500	2,380	3,400	8,470	5,600	1,720	1,330	1,230
25	1,630	1,210	1,440	1,070	1,500	2,520	3,660	9,220	4,990	1,670	1,550	1,130
26	1,730	1,140	1,270	1,200	1,370	2,830	3,840	9,480	4,220	1,740	1,530	1,110
27	1,600	1,130	1,320	1,100	1,320	3,070	4,020	10,300	3,840	1,790	1,320	1,090
28	1,510	1,150	1,270	1,010	1,370	3,320	4,400	9,740	3,760	1,770	1,290	1,090
29	1,410	1,400	1,120	985	-	3,820	4,690	9,480	3,660	1,780	1,350	1,100
30	1,410	1,550	1,140	1,010	-	4,310	5,090	9,480	3,400	1,710	1,400	1,110
31	1,440	-	1,110	1,000	-	4,220	-	9,480	-	1,650	1,620	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	36,034	1,730	826	1,162	71,470
November.....	42,217	1,980	967	1,407	85,740
December.....	38,333	1,620	601	1,237	76,030
Calendar year 1940.....	1,143,661	12,900	601	3,125	2,268,000
January.....	29,744	1,200	714	959	59,000
February.....	33,650	1,500	985	1,202	66,740
March.....	74,650	4,310	1,610	2,408	148,100
April.....	123,990	5,090	3,070	4,133	246,900
May.....	245,510	10,300	5,500	7,920	487,000
June.....	200,500	9,220	3,400	6,683	397,700
July.....	84,990	3,400	1,650	2,093	128,700
August.....	47,600	1,980	1,250	1,555	94,410
September.....	39,970	1,570	1,090	1,332	79,280
Water year 1940-41.....	977,068	10,300	601	2,677	1,938,000

a No gauge-height record; discharge interpolated.

b Computed from staff-gage reading.

## Payette River near Emmett, Idaho

Location.- Water-stage recorder, lat. 43°56', long. 116°27', in sec. 22, T. 7 N., R. 1 W., three-eighths of a mile downstream from Black Canyon Dam and 5 miles northeast of Emmett.

Records available.- June 1925 to September 1941.

Average discharge.- 16 years, 2,710 second-feet.

Extremes.- Maximum discharge during year, 13,900 second-feet May 13 (gage height, 9.70 feet); minimum, 6 second-feet Dec. 29 (gage height, 1.23 feet), from rating curve extended below 200 second-feet.

1925-41: Maximum discharge, 22,800 second-feet May 1, 1938 (gage height, 12.90 feet); minimum, 2 second-feet (estimated) Jan. 13, 1938, when gates in dam were closed.

Remarks.- Records good. Diversions above station for irrigation. Flow regulated by diversion at and operation of gates in Black Canyon Dam and by Deadwood Reservoir (see p. 165), Payette Lake (see p. 168), and Lake Fork Reservoir (see p. 173).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	1,520	2,160	1,220	1,180	2,100	4,490	5,170	9,000	2,970	926	1,000
2	1,150	1,900	1,960	1,150	1,220	2,690	4,660	5,340	8,580	2,830	1,010	970
3	1,280	2,160	1,640	948	1,300	2,970	5,000	5,700	8,180	2,620	1,110	992
4	1,530	2,160	1,680	860	1,090	2,690	5,000	6,240	8,380	2,480	893	981
5	1,210	1,900	1,770	1,020	1,110	2,760	5,520	6,430	8,180	2,220	860	981
6	1,120	1,840	1,620	1,190	1,100	2,480	5,170	6,430	7,780	1,960	992	882
7	1,150	1,580	1,580	1,190	1,260	2,480	4,490	6,060	8,380	1,840	810	840
8	1,010	1,600	1,580	1,190	1,520	2,360	4,090	5,880	9,860	1,540	871	850
9	981	1,900	1,600	1,080	1,350	2,420	4,170	6,060	9,000	1,480	860	840
10	981	1,710	1,470	970	1,310	2,420	4,660	5,880	8,180	1,360	893	820
11	915	1,610	1,220	959	1,500	2,360	5,520	5,880	7,580	1,160	1,050	810
12	840	1,600	871	970	1,900	2,360	4,830	6,810	7,380	1,090	840	810
13	860	1,370	820	970	1,900	2,220	4,580	8,790	6,810	1,220	1,360	810
14	850	1,050	840	1,070	1,710	2,220	4,660	9,420	6,620	1,120	1,060	810
15	800	1,010	as00	1,190	1,560	2,100	4,660	9,420	6,240	1,060	750	820
16	780	1,150	al,200	1,080	1,460	2,030	4,660	9,210	6,240	1,000	780	830
17	882	1,440	al,300	1,090	1,070	2,030	4,490	9,000	6,060	1,000	915	860
18	860	1,540	al,400	1,060	770	2,480	4,170	8,790	5,340	992	1,240	871
19	850	1,520	al,500	1,090	770	3,040	3,480	8,180	6,620	959	1,000	860
20	893	1,340	al,600	1,150	780	3,110	3,110	7,580	7,000	970	1,080	850
21	882	1,190	1,610	1,170	790	2,900	2,970	7,000	6,620	959	850	840
22	926	1,200	1,640	1,170	790	2,780	2,900	7,190	6,620	959	860	860
23	1,150	1,280	1,640	1,190	800	2,830	2,970	7,380	5,880	981	770	871
24	1,140	1,400	1,650	1,290	850	2,690	3,180	8,180	5,340	992	760	882
25	1,640	1,520	1,710	1,700	1,740	2,620	3,250	9,210	4,580	1,050	780	740
26	2,030	1,540	1,720	2,100	1,960	2,970	3,550	9,000	3,850	1,770	740	740
27	1,680	1,390	1,710	1,960	1,730	3,250	3,620	10,100	3,400	1,840	720	740
28	1,610	1,410	1,840	1,830	1,900	3,550	2,830	9,640	3,320	1,640	790	750
29	1,630	1,540	1,090	1,270	-	3,780	3,780	9,210	3,250	1,300	770	760
30	1,470	2,360	1,110	1,210	-	4,660	4,490	9,210	2,970	1,170	760	760
31	1,440	-	1,400	1,180	-	4,830	-	9,420	-	948	915	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						35,400	2,030	780	1,142		70,210	
November.....						47,020	2,360	1,010	1,567		95,280	
December.....						45,731	2,160	800	1,475		90,710	
Calendar year 1940.....						1,172,118	16,200	710	3,203		2,325,000	
January.....						37,207	2,100	860	1,200		73,800	
February.....						36,400	1,960	770	1,300		72,200	
March.....						86,160	4,830	2,030	2,779		170,900	
April.....						124,960	5,520	2,530	4,165		247,800	
May.....						237,810	10,100	5,170	7,671		471,700	
June.....						197,240	9,860	2,970	6,575		391,200	
July.....						45,480	2,970	948	1,467		90,210	
August.....						28,015	1,360	720	904		55,570	
September.....						25,430	1,000	740	848		50,440	
Water year 1940-41.....						946,843	10,100	720	2,594		1,878,000	

a Incomplete or no gage-height record; discharge computed on basis of partial gage-height record, recorded range of stage, and records for stations near Horseshoe Bend and near Payette.



## Payette River near Payette, Idaho

Location.— Water-stage recorder, lat. 44°02'30", long. 116°55'30", in SW¼ sec. 10, T. 8 N., R. 5 W., at highway bridge, 1½ miles south of Payette.

Records available.— August 1935 to September 1941. January 1895 to July 1897 (incomplete) at site 2 miles downstream.

Extremes.— Maximum discharge during year, 10,300 second-feet June 8 (gage height, 8.57 feet); minimum, 433 second-feet July 21 (gage height, 3.23 feet).  
1935-41: Maximum discharge observed, 23,400 second-feet May 2, 1938 (gage height, 11.90 feet); minimum, 180 second-feet Oct. 13, 20, 1935 (gage height, 2.04 feet).

Remarks.— Records good. Many diversions above station for irrigation. Flow regulated also by Black Canyon Dam and by reservoirs on tributary streams.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

3.2	415	4.5	1,640	6.4	4,640
3.4	540	4.8	2,030	6.8	5,460
3.6	695	5.1	2,450	7.2	6,370
3.8	870	5.4	2,900	7.6	7,350
4.0	1,060	5.7	3,380	8.0	8,500
4.2	1,280	6.0	3,900	8.4	9,700

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,040	1,840	2,600	1,620	1,450	2,520	4,640	4,560	9,090	2,750	608	738
2	1,300	2,450	2,310	1,550	1,500	2,750	4,540	4,740	8,500	2,600	570	834
3	1,520	2,750	2,100	1,400	1,560	3,380	4,840	4,940	7,930	2,450	615	852
4	1,640	2,600	1,960	1,100	1,440	3,060	5,140	5,680	7,930	2,240	631	861
5	1,700	2,380	2,030	1,160	1,360	2,980	5,460	6,130	7,930	1,960	534	861
6	1,360	2,240	1,960	1,390	1,380	2,900	5,570	6,610	7,650	1,700	631	843
7	1,410	2,030	1,900	1,450	1,510	2,750	4,840	6,130	8,210	1,440	555	754
8	1,350	2,030	1,900	1,410	1,770	2,750	4,170	5,790	9,700	1,250	498	746
9	1,200	2,240	1,840	1,420	1,840	2,600	4,080	6,130	9,390	960	482	738
10	1,180	2,170	1,900	1,250	1,700	2,750	4,360	5,790	8,210	852	469	852
11	1,150	1,960	1,640	1,200	2,750	2,600	5,680	5,680	7,650	746	520	729
12	1,070	1,900	1,290	1,190	2,310	2,600	5,250	6,130	7,120	608	695	720
13	980	1,840	1,100	1,200	2,450	2,450	4,840	7,930	6,610	600	600	738
14	933	1,540	1,130	1,260	2,170	2,450	4,640	9,390	6,370	647	852	729
15	915	1,350	1,140	1,560	1,960	2,310	4,640	9,700	6,900	578	712	720
16	879	1,320	1,340	1,460	1,840	2,170	4,740	9,090	5,790	620	548	712
17	870	1,570	1,500	1,320	1,770	2,240	4,540	8,790	5,460	501	534	738
18	980	1,840	1,620	1,350	1,120	2,380	4,260	8,500	5,250	488	671	754
19	942	1,840	1,770	1,390	1,060	3,060	3,640	8,210	6,130	501	897	738
20	951	1,700	1,840	1,560	1,070	3,220	2,900	7,120	6,860	475	780	746
21	980	1,570	1,900	1,690	1,070	3,140	2,750	6,610	6,610	482	780	738
22	980	1,460	1,900	1,560	1,100	2,980	2,450	6,370	6,370	475	647	712
23	1,050	1,480	1,900	1,670	1,130	2,980	2,380	6,370	6,130	475	639	712
24	1,330	1,630	1,960	1,640	1,290	2,900	2,450	6,860	5,360	475	585	720
25	1,580	1,700	1,960	2,170	1,700	2,680	2,600	8,210	4,540	475	570	746
26	2,240	1,840	2,100	2,900	2,380	2,900	2,600	8,500	3,810	494	608	623
27	2,170	1,640	2,170	2,450	2,100	3,220	2,900	9,090	3,300	552	592	615
28	1,960	1,700	2,240	2,170	1,960	3,460	2,750	9,390	3,060	671	570	623
29	1,900	2,030	1,960	1,700	-	3,720	2,450	9,090	3,220	671	608	615
30	1,900	2,680	1,150	1,540	-	4,260	3,460	8,790	2,900	712	615	615
31	1,640	-	1,700	1,510	-	4,840	-	9,090	-	712	631	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						41,300	2,240	870	1,332	81,920		
November.....						57,300	2,750	1,320	1,910	113,700		
December.....						55,810	2,600	1,100	1,800	110,700		
Calendar year 1940.....						1,181,574	17,700	520	3,228	2,344,000		
January.....						47,840	2,900	1,100	1,543	94,890		
February.....						46,730	2,750	1,060	1,669	92,690		
March.....						91,000	4,840	2,170	2,935	180,500		
April.....						119,560	5,680	2,380	3,985	237,100		
May.....						228,210	9,700	4,360	7,255	446,700		
June.....						192,980	9,700	2,900	6,433	382,800		
July.....						30,070	2,750	475	970	59,640		
August.....						19,237	897	469	621	38,160		
September.....						22,122	861	615	737	43,880		
Water year 1940-41.....						949,159	9,700	469	2,600	1,883,000		

## Clear Creek at Lowman, Idaho

Location.- Staff gage, lat. 44°05', long. 115°37', in SW $\frac{1}{4}$  sec. 27, T. 9 N., R. 7 E., 200 feet upstream from mouth and 350 feet downstream from highway bridge crossing Clear Creek at Lowman.

Drainage area.- 59.6 square miles.

Records available.- May to September 1941.

Extremes.- Maximum discharge observed during period, 459 second-feet May 26 (gage height, 4.66 feet); minimum observed, 34 second-feet Sept. 23, 24, 26, 30 (gage height, 2.16 feet).

Remarks.- Records good. Feeder canal for small power plant diverts about 1 mile above gage; water is returned to creek above station except that used for irrigation of small pasture adjacent to Lowman. Gage read twice daily.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	300	104	50	38
2								-	277	99	49	42
3								-	288	94	49	42
4								-	277	89	46	40
5								-	288	84	46	39
6								-	288	84	46	39
7								-	288	84	46	38
8								-	300	80	46	38
9								-	277	80	47	39
10								188	266	76	50	38
11								215	255	71	53	37
12								255	255	71	57	40
13								312	255	71	50	39
14								312	246	67	47	39
15								266	224	67	46	38
16								277	206	67	44	38
17								265	188	63	43	35
18								255	206	63	52	35
19								254	206	62	48	38
20								246	188	61	47	38
21								246	164	60	44	37
22								277	149	58	43	35
23								288	135	57	42	35
24								324	135	56	40	35
25								324	118	53	40	35
26								430	122	58	42	34
27								402	122	62	42	35
28								388	116	63	40	35
29								336	116	56	39	35
30								324	110	54	40	34
31								312	-	52	40	-
Month				Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off			
									Inches	Acres-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....				-	-	-	-	-	-	-	-	-
February.....				-	-	-	-	-	-	-	-	-
March.....				-	-	-	-	-	-	-	-	-
April.....				-	-	-	-	-	-	-	-	-
May 10-31.....				6,466	430	188	294	4.93	4.03	12,830		
June.....				6,365	300	110	212	3.56	3.97	12,620		
July.....				2,166	104	52	69.9	1.17	1.35	4,300		
August.....				1,414	57	39	45.6	.765	.88	2,800		
September.....				1,120	42	34	37.3	.626	.70	2,220		
The period.....				-	-	-	-	-	-	-	34,770	

## Deadwood Reservoir near Lowman, Idaho

Location.- Staff gage, lat. 44°18', long. 115°39', in SE $\frac{1}{4}$  sec. 8, T. 11 N., R. 7 E., at dam on Deadwood River, 15 miles north of Lowman. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Drainage area.- 108 square miles.

Records available.- October 1935 to September 1941.

Extremes.- Maximum elevation observed during year, 5,335.6 feet June 8; minimum observed, 5,305.5 feet Nov. 6.  
1936-41: Maximum elevation observed, 5,336.6 feet June 9, 10, 1938; minimum observed, 5,260.1 feet Oct. 1, 1935.

Remarks.- Reservoir is formed by concrete arch dam, completed in 1930; storage began Nov. 2, 1930. Reported capacity, 160,400 acre-feet between elevation 5,230.0 feet (minimum operating level because of fish protection, 27 feet above sill of emergency gate in front of needle valve) and 5,334.0 feet (crest of spillway). Storage below elevation 5,230.0 feet about 1,500 acre-feet. Water is used to augment flow of Payette River at Black Canyon power plant near Emmett. During the late fall of 1936, Bureau of Reclamation cut a transmountain canal to divert a small flow of water from a tributary of Johnson Creek in Salmon River Basin to Deadwood River Basin for supplemental storage in Deadwood Reservoir. Measurements of May 24, July 1, and Aug. 14, 1941, indicate flow in this canal of 32.9, 6.6, and 1.6 second-feet, respectively. Gage read once daily.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Elevation, in feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308.25	306.00	307.25	308.10	309.75	310.70	313.10	319.65	335.40	334.60	335.20	332.15
2	308.25	306.90	307.30	308.15	309.75	310.80	313.40	320.00	335.50	334.80	333.10	331.90
3	308.30	306.80	307.40	308.20	309.75	310.90	313.60	320.55	335.55	334.80	333.05	331.70
4	308.45	306.70	307.45	308.25	309.80	310.95	313.80	321.10	335.55	334.75	333.10	331.45
5	308.53	306.60	307.50	308.30	309.80	311.00	314.00	321.60	335.55	334.75	333.10	331.25
6	308.60	306.50	307.60	308.35	309.80	311.05	314.20	322.00	335.50	334.70	333.00	331.00
7	308.65	306.50	307.65	308.45	309.85	311.10	314.40	322.45	335.55	334.70	332.80	330.85
8	308.70	306.70	307.70	308.50	309.85	311.15	314.50	322.90	335.60	334.65	332.70	330.65
9	308.75	306.75	307.75	308.55	309.90	311.20	314.60	323.30	335.55	334.60	332.70	330.45
10	308.80	306.80	307.80	308.60	309.90	311.25	314.70	323.60	335.50	334.50	332.70	330.25
11	308.85	306.85	307.80	308.65	309.95	311.30	314.90	324.00	335.45	334.60	332.60	330.00
12	308.90	306.90	307.85	308.70	310.00	311.35	315.10	324.40	335.40	334.45	332.60	329.80
13	308.95	306.95	307.85	308.75	310.00	311.40	315.30	324.80	335.40	334.35	332.60	329.60
14	309.00	306.00	307.75	308.65	310.05	311.45	315.50	325.10	335.40	334.30	332.64	329.30
15	309.05	306.05	307.75	308.65	310.05	311.50	315.70	325.60	335.35	334.20	332.70	329.10
16	309.10	306.10	307.60	309.10	310.10	311.55	315.90	327.40	335.35	334.10	332.60	328.85
17	309.15	306.20	307.45	309.20	310.10	311.65	316.10	327.90	335.30	334.00	332.60	328.60
18	309.20	306.30	307.30	309.30	310.15	311.75	316.30	328.40	335.35	334.05	332.65	328.30
19	309.25	306.35	307.15	309.35	310.20	311.85	316.40	328.90	335.35	334.00	332.75	328.10
20	309.30	306.40	307.05	309.40	310.25	311.95	316.50	329.40	335.35	333.95	332.85	327.90
21	309.30	306.45	306.95	309.45	310.30	312.00	316.70	329.90	335.30	333.80	332.90	327.70
22	309.20	306.50	307.25	309.45	310.35	312.05	316.90	330.40	335.20	333.80	333.00	327.50
23	309.00	306.55	307.50	309.50	310.40	312.10	317.20	330.90	335.15	333.50	333.05	327.20
24	308.91	306.60	307.60	309.55	310.45	312.15	317.50	331.52	335.10	333.15	333.00	327.00
25	308.90	306.65	307.70	309.60	310.50	312.25	317.70	332.20	335.00	332.95	332.95	326.90
26	308.80	306.70	307.80	309.65	310.55	312.35	317.90	332.90	334.95	332.95	332.90	326.80
27	308.65	306.75	307.90	309.65	310.60	312.40	318.20	333.70	334.95	333.00	332.90	326.70
28	308.50	306.85	307.95	309.65	310.65	312.45	318.50	334.30	334.90	332.95	332.90	326.50
29	308.35	307.10	308.00	309.70	-	312.50	318.90	334.70	334.90	333.10	332.79	326.30
30	308.20	307.20	308.05	309.70	-	312.70	319.30	335.00	334.85	333.15	332.65	326.10
31	308.05	-	308.10	309.70	-	312.90	-	335.20	-	333.20	332.40	-

Note.- Add 5,000 feet to obtain elevations above mean sea level.

Deadwood River below Deadwood Reservoir, near Lowman, Idaho

Location.- Water-stage recorder, lat.  $44^{\circ}18'$ , long.  $115^{\circ}39'$ , in NE $\frac{1}{4}$  sec. 17, T. 11 N., R 7 E., 300 feet upstream from Wilson Creek, a quarter of a mile downstream from Deadwood Dam and lower end of Deadwood Basin, 15 miles north of Lowman, and 18 miles upstream from mouth.

Drainage area.- 108 square miles.

Records available.- October 1926 to September 1941.

Average discharge.- 14 years (1927-41), 176 second-feet.

Extremes.- Maximum discharge during year, 675 second-feet June 8 (gage height, 3.37 feet); minimum not determined, occurred when gates at dam were closed.  
1926-41: Maximum discharge, 2,150 second-feet May 26, 1928 (gage height, 5.67 feet, site and datum then in use); small amount of leakage from reservoir for long periods during 1933-41 when gates in dam were closed.

Remarks.- Records good except those below 5 second-feet, which are fair, and those for Dec. 14-24, which are poor. Flow regulated since Nov. 2, 1930, by Deadwood Reservoir (see p. 165). During late fall of 1936 the Bureau of Reclamation cut an intermountain canal to divert a small flow from a tributary of Johnson Creek to Deadwood River Basin for supplemental storage in Deadwood Reservoir. Measurements of May 24, July 1, and August 14, 1941, indicate flow in this canal of 32.9, 6.6, and 1.6 second-feet, respectively.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	110	h234							585	277	174	432		
2	91	h234							602	261	178	432		
3	35	h234							620	247	54	432		
4	a4	h234							638	236	54	384		
5	h4	h234							638	223	110	384		
6	a4	h90	a3						620	206	389	353		
7	a4								638	196	250	341		
8	a4								675	187	110	347		
9	a4								655	174	91	350		
10	a4								620	166	144	384		
11	a4							a3	585	272	169	416		
12	a4								568	300	176	432		
13	a4								568	272	73	432		
14	a4								d170	550	244	h4	432	
15	a4								d270	533	226	113	449	
16	a4			a3					516	213	114	449		
17	a4								d270	482	144	56	449	
18	a4								d270	482	146	38	432	
19	a4								d275	516	180	8	416	
20	a4								d275	516	268	6	416	
21	h141								482	416	a4	416		
22	h223								d275	449	482	a4	416	
23	h231								d150	416	400	76	365	
24	h231								d35	h3	384	332	113	250
25	h234									a3	353	314	116	250
26	h229		a3						a3	335	113	117	250	
27	h229								5	323	81	117	250	
28	h229								85	311	29	165	274	
29	h229								231	300	a4	234	288	
30	h229								368	294	a4	365	347	
31	h229	-						499	-	46	432	-		
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet			
October.....						2,738	234	4	58.3		5,430			
November.....						1,332	234	-	44.4		2,640			
December.....						2,595	275	-	83.7		5,160			
Calendar year 1940.....						64,380	1,020	-	176		127,700			
January.....						93	-	-	3.0		134			
February.....						84	-	-	3.0		167			
March.....						93	-	-	3.0		184			
April.....						90	-	-	3.0		179			
May.....						1,266	499	-	40.8		2,510			
June.....						15,254	675	294	508		30,260			
July.....						6,648	482	4	214		13,190			
August.....						4,022	432	4	132		8,100			
September.....						11,268	449	250	376		22,550			
Water year 1940-41.....						45,543	675	-	125		90,340			

a No gage-height record; discharge made up of leakage and seepage only and computed on the basis of one discharge measurement, weather records, and information furnished by observer.

d Doubtful gage-height record; discharge computed on basis of weather records, reservoir records, and records for station near Lowman and other Payette River stations.

h Computed from staff-gage readings.

## Deadwood River near Lowman, Idaho

Location.- Water-stage recorder, lat. 44°05', long. 115°40', in sec. 29, T. 9 N., R. 7 E., 700 feet upstream from mouth and 2½ miles west of Lowman.

Records available.- August 1921 to September 1941.

Average discharge.- 20 years, 350 second-feet.

Extremes.- Maximum discharge during year, 1,280 second-feet June 8 (gage height, 3.28 feet); minimum daily, 35 second-feet Dec. 12, 13.  
1921-41: Maximum discharge, 4,230 second-feet May 9, 1928 (gage height, 5.17 feet), from rating curve extended above 3,200 second-feet; minimum, 28 second-feet Nov. 4, 1935 (gage height, 0.83 foot).

Remarks.- Records good except those for Nov. 14-17, 23-30, Jan. 2-18, Jan. 21 to Feb. 10, which are fair, and those Dec. 11-23, which are poor. Flow regulated by Deadwood Reservoir (see p. 165). Small amount of water diverted from tributary of Johnson Creek to Deadwood River Basin during the year.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	200	329	80	46	a65	102	252	542	1,150	487	214	512
2	190	354	75	b40	a70	110	269	524	1,150	464	314	518
3	200	349	73	b40	a65	104	278	520	1,150	452	221	518
4	91	329	72	b45	a65	97	261	547	1,150	423	95	498
5	77	329	70	b55	a65	95	257	547	1,140	407	170	469
6	70	281	70	b55	a70	89	225	520	1,100	391	360	452
7	66	89	67	b70	a70	89	210	a580	1,170	369	450	415
8	64	95	64	b65	a70	95	207	a570	1,240	354	225	418
9	62	89	61	b60	a70	99	218	a560	1,180	339	183	418
10	61	82	41	b60	a70	97	248	a550	1,110	324	221	435
11	60	77	b40	a60	73	102	240	533	1,060	374	282	469
12	60	62	b35	a65	75	102	240	724	1,030	458	324	451
13	58	56	a35	a65	67	99	257	864	1,010	423	240	481
14	58	b60	a80	a70	68	91	265	848	986	401	91	481
15	58	b80	h329	a70	60	93	267	739	942	380	122	493
16	58	*b78	a330	a55	57	95	265	660	898	359	233	499
17	57	b80	a335	a55	67	104	244	626	848	310	167	499
18	57	80	a335	a55	75	124	225	600	873	244	190	487
19	57	66	a340	h67	70	129	210	542	915	296	110	481
20	56	56	a340	*h66	67	126	207	518	856	343	108	475
21	85	66	a340	a65	67	124	214	518	784	491	95	469
22	269	54	a340	a65	72	129	221	535	732	600	86	469
23	282	b50	a310	a70	75	126	261	574	688	542	89	469
24	310	b60	200	a65	82	124	295	626	654	458	186	329
25	396	b70	78	a70	78	129	339	696	613	458	190	314
26	359	b65	70	a70	72	147	369	717	580	273	190	310
27	324	b65	75	a65	75	164	395	703	568	210	193	314
28	319	b70	68	a60	75	183	440	695	555	186	210	329
29	319	b90	60	a60	-	203	446	769	535	112	295	354
30	324	97	72	a65	-	240	512	898	512	99	407	385
31	324	-	66	a65	-	244	-	1,070	-	99	512	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	4,951	396	56	160	9,820
November.....	3,708	354	50	124	7,350
December.....	4,551	340	35	147	9,030
Calendar year 1940.....	137,131	1,150	35	375	272,000
January.....	1,924	70	40	62.1	3,880
February.....	1,961	82	57	70.0	3,890
March.....	3,855	244	89	124	7,650
April.....	8,359	512	207	279	16,680
May.....	20,417	1,070	518	659	40,500
June.....	27,180	1,240	512	906	53,910
July.....	11,126	600	99	359	22,070
August.....	6,774	512	86	219	13,440
September.....	15,239	518	310	441	26,260
Water year 1940-41.....	108,045	1,240	35	296	214,300

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for other stations in Payette River Basin.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

## Payette Lake at Lardo, Idaho

Location.- Staff gage, lat. 44°55', long. 116°07', in sec. 8, T. 18 N., R. 3 E., at outlet of lake on North Fork of Payette River, at Lardo. Datum of gage is 4,982.24 feet above mean sea level (adjustment of 1912).

Drainage area.- 131 square miles.

Records available.- August 1921 to September 1941 (fragmentary).

Extremes.- Maximum gage height observed during year, 8.44 feet June 20; minimum observed, 1.80 feet Sept. 26.  
1921-41: Maximum gage height observed, 8.75 feet July 13, 1935; minimum observed, 0.95 foot Oct. 3, 1931.

Remarks.- Elevation of Payette Lake is regulated within the natural range by a structure consisting of a series of concrete-filled cribs supporting removable flashboards, completed in 1923. Some regulation is reported to have been effected by timber flashboards for several earlier years. Lake area is approximately 5,000 acres and a variation in stage of 5 feet corresponds to a capacity of about 25,000 acre-feet. Water is used for irrigation of lands in the vicinity of Emmett. No diversion above station. Because of drawdown in outlet channel, stages at the gage are slightly lower at times than stages of lake.

Cooperation.- Gage-height record furnished by Forest Service supplemented during period Apr. 5 to June 30 by observation by employee of Payette Valley Water Users Association and July 14 to August 17 by records of Bureau of Reclamation.

Gage height, in feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	3.25	-	5.37	7.32	8.16	5.62	-
2	-	-	-	-	-	-	-	5.95	7.20	-	5.42	2.25
3	-	-	-	2.64	3.44	-	-	6.34	7.14	-	5.22	-
4	-	-	-	-	-	-	3.42	6.77	7.10	-	5.02	-
5	-	-	-	-	-	-	-	6.92	7.20	-	4.82	-
6	-	-	2.16	-	-	-	-	6.92	7.04	-	4.62	2.13
7	-	-	-	-	3.47	-	-	6.87	7.02	-	4.42	-
8	-	-	-	-	-	-	-	6.82	6.97	-	4.25	-
9	-	-	-	-	-	-	-	6.80	6.94	-	4.12	-
10	-	-	-	-	-	-	-	6.77	6.92	-	3.97	-
11	-	-	-	-	-	-	4.02	6.97	6.92	8.12	3.76	-
12	-	-	2.05	-	-	-	-	7.31	7.10	-	3.62	-
13	-	-	-	-	-	-	-	7.77	7.37	-	3.46	-
14	1.99	-	-	-	3.49	2.57	-	7.77	7.52	8.07	3.37	1.95
15	-	-	-	-	-	-	-	7.64	7.70	8.00	3.24	-
16	-	2.13	-	-	-	-	-	7.40	7.77	7.92	3.10	-
17	-	-	-	-	-	-	-	7.31	7.77	7.82	2.98	-
18	-	-	-	-	-	-	4.17	7.22	7.82	7.74	-	-
19	-	-	-	-	-	-	-	6.97	8.24	7.59	-	-
20	-	-	-	-	-	-	-	6.92	8.40	7.56	-	1.89
21	1.90	-	-	-	-	2.41	-	6.92	8.22	7.48	-	-
22	-	2.15	-	-	-	-	-	7.04	8.07	7.39	-	-
23	-	-	-	-	-	-	-	7.27	7.87	7.22	-	-
24	1.92	-	-	-	-	-	-	7.52	7.82	7.04	-	-
25	-	-	-	-	-	-	4.38	7.84	7.87	6.87	-	-
26	2.08	-	-	-	-	-	4.48	7.94	7.92	6.68	-	1.80
27	-	-	2.49	-	-	-	-	4.62	7.94	8.07	6.50	1.81
28	-	-	-	-	-	-	-	4.94	7.80	8.15	6.29	-
29	-	2.12	-	-	-	2.43	-	4.92	7.54	8.17	6.17	-
30	-	-	-	-	-	-	5.02	7.47	8.17	6.00	2.38	-
31	-	-	-	3.42	-	-	-	7.42	-	5.82	-	-

## North Fork of Payette River at Lardo, Idaho

Location.- Water-stage recorder, lat. 44°54'30", long. 116°07'30", in sec. 8, T. 18 N., R. 3 E., a quarter of a mile downstream from Lardo and outlet of Payette Lake.

Drainage area.- 131 square miles.

Records available.- September 1908 to June 1917, May 1919 to September 1941.

Average discharge.- 30 years (1908-16, 1919-41), 342 second-feet.

Extremes.- Maximum discharge during year, 2,500 second-feet May 27 (gage height, 6.05 feet); minimum, 2 second-feet Sept. 23 (gage height, 1.07 feet).  
1908-17, 1919-41: Maximum discharge, 4,260 second-feet June 10, 1933; maximum gage height, 7.5 feet June 5, 1909, June 10, 1933; practically no flow Nov. 5-8, 1931, Nov. 17-24, 1933, and Nov. 14-27, 1935, Oct. 22 to Nov. 11, 1938.

Remarks.- Records good. Flow partly regulated by flashboards placed at outlet of Payette Lake during spring and removed during irrigation season. Since November 1940 some water from Payette Lake by-passed through fish hatchery.

Cooperation.- Gage-height record collected in cooperation with Forest Service.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

1.0	1.4	3.0	273	5.0	1,550
1.4	10	3.4	440	5.4	1,910
1.8	31	3.8	655	5.8	2,300
2.2	72	4.2	910	6.0	2,500
2.6	154	4.6	1,210		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	89	90	5	57	230	14	635	1,860	368	515	130
2	54	132	90	65	60	346	16	505	1,750	310	530	126
3	30	140	90	65	61	352	20	754	1,680	268	515	119
4	84	135	88	65	61	308	47	1,060	1,730	290	535	115
5	64	132	88	5	61	292	79	1,170	1,640	214	525	110
6	82	132	87	5	61	277	92	1,170	1,460	186	515	104
7	60	132	87	6	64	266	104	1,130	1,370	167	515	100
8	55	132	85	6	123	246	123	1,090	1,370	144	490	90
9	51	132	84	6	176	227	149	1,060	1,290	135	465	84
10	28	130	82	6	116	220	188	1,050	1,090	119	520	79
11	25	126	80	6	43	220	211	1,210	796	112	510	75
12	58	121	77	6	87	211	236	1,500	470	108	475	72
13	57	117	77	6	88	200	220	2,000	530	102	440	69
14	24	110	74	6	87	191	280	2,300	607	175	404	66
15	5	108	72	6	84	183	330	2,160	661	284	368	64
16	21	106	71	6	82	175	334	1,910	679	277	346	61
17	44	106	69	9	80	170	326	1,780	673	277	326	58
18	68	49	74	16	77	167	318	1,780	728	254	303	57
19	65	6	32	24	77	164	306	1,680	1,220	284	277	57
20	63	40	4	27	75	162	295	1,370	1,730	284	259	68
21	61	90	4	30	74	157	303	1,210	1,600	292	246	55
22	60	88	4	33	74	157	314	1,290	1,310	295	233	45
23	38	87	4	36	74	157	346	1,420	865	448	217	31
24	22	85	4	40	77	154	400	1,640	472	520	205	32
25	28	85	4	48	80	152	470	2,000	224	551	197	49
26	75	84	4	55	79	152	530	2,250	172	562	185	41
27	79	85	4	57	77	154	613	2,450	152	556	177	39
28	70	90	4	57	79	159	703	2,350	177	556	167	38
29	110	94	4	57	-	102	774	2,060	346	551	157	38
30	112	92	4	57	-	14	878	1,950	382	540	149	37
31	121	-	5	57	-	13	-	1,910	-	530	140	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,794	121	5	57.9	3,560
November.....	3,055	140	6	102	6,060
December.....	1,546	90	4	49.9	3,070
Calendar year 1940.....	129,363	2,500	4	353	256,600
January.....	693	57	5	22.4	1,370
February.....	2,233	175	43	79.8	4,430
March.....	5,943	346	13	192	11,790
April.....	9,027	878	14	301	17,900
May.....	47,794	2,450	505	1,542	94,800
June.....	29,014	1,860	152	987	57,560
July.....	9,799	552	102	315	19,440
August.....	10,909	855	140	352	21,640
September.....	2,098	130	31	69.9	4,160
Water year 1940-41.....	123,905	2,450	4	339	245,800

b Stage-discharge relation affected by ice.

## North Fork of Payette River at Cascade, Idaho

Location.- Staff gage, lat. 44°31', long. 116°02', in NE¼ sec. 36, T. 14 N., R. 3 E., at Cascade, 375 feet downstream from Halleck and Howard mill dam, half a mile upstream from Beaver Creek, and 2½ miles downstream from Willow Creek.

Drainage area.- 626 square miles.

Records available.- May to September 1941.

Extremes.- Maximum discharge observed during period, 4,760 second-feet May 16 (gage height, 4.78 feet); minimum observed, 175 second-feet Sept. 30 (gage height, 0.78 foot).

Remarks.- Records good. Flow regulated by Payette Lake (see p. 168), Lake Fork Reservoir (see p. 173) and slightly affected by flashboards on Halleck and Howard mill dam. Gage read twice daily. Several diversions from tributaries above station for irrigation.

Cooperation.- Gage-height record furnished by Bureau of Reclamation.

Rating table, May 1 to Sept. 30 (gage height, in feet, and discharge, in second-feet)

0.7	155	1.6	880	3.2	2,670
1.0	310	2.0	1,250	4.0	3,710
1.3	535	2.4	1,700	4.8	4,760

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,820	3,970	1,030	663	338
2								1,820	3,710	978	663	338
3								1,580	3,450	872	644	338
4								1,820	3,450	972	644	338
5								2,420	3,320	720	625	310
6								2,420	3,190	a828	625	304
7								2,420	2,930	555	618	304
8								2,420	3,060	555	607	297
9								2,540	3,060	448	607	271
10								2,420	2,670	366	598	271
11								2,420	2,420	359	607	258
12								2,800	2,060	338	692	252
13								3,190	1,470	317	692	245
14								4,100	1,700	278	625	245
15								4,490	1,640	290	580	252
16								4,760	1,640	395	535	258
17								4,490	1,580	410	503	245
18								3,970	1,640	402	495	215
19								3,840	2,060	402	487	215
20								3,320	2,930	395	503	239
21								2,930	3,190	388	463	a236
22								2,670	3,060	395	471	233
23								2,800	2,540	388	448	221
24								2,800	1,940	425	487	209
25								3,320	1,300	527	402	203
26								3,710	1,030	607	395	197
27								4,100	925	634	395	197
28								4,490	978	692	410	197
29								4,490	925	710	380	197
30								4,230	978	720	366	185
31								4,100	-	692	352	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....								-	-	-	-	-
February.....								-	-	-	-	-
March.....								-	-	-	-	-
April.....								-	-	-	-	-
May.....								98,700	4,760	1,580	3,184	195,800
June.....								68,816	3,970	925	2,294	135,600
July.....								16,766	1,030	278	541	33,250
August.....								16,580	692	352	535	32,690
September.....								7,608	338	185	254	15,090
The period.....								-	-	-	-	413,500

a No gage-height record; discharge interpolated.



## North Fork of Payette River near Smiths Ferry, Idaho

Location.- Chain gage, lat. 44°16', long. 116°04', in SW¼ sec. 23, T. 11 N., R. 3 E., 420 feet downstream from Beaver Creek, 2½ miles downstream from Tripod Creek, and 2 5/8 miles southeast of Smiths Ferry.

Drainage area.- 893 square miles.

Records available.- May to September 1941.

Extremes.- Maximum discharge observed during period, 4,760 second-feet May 31 (gage height, 8.48 feet); minimum observed, 218 second-feet Sept. 29 (gage height, 2.66 feet).

Remarks.- Records fair. Flow regulated by Payette Lake (see p. 168) and Lake Fork Reservoir (see p. 173). Gage read twice daily. Several diversions from tributaries above station for irrigation.

Rating table, May 31 to Sept. 30, 1941 (gage height, in feet, and discharge, in second-feet)

2.6	205	4.2	825	6.6	2,660
3.0	312	4.6	1,070	7.5	3,600
3.4	441	5.0	1,540	8.5	4,760
3.8	607	5.8	1,940		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									4,400	d1,250	825	406
2									4,280	d1,250	765	390
3									4,180	d1,150	710	406
4									3,930	d1,000	710	406
5									3,930	d950	710	390
6									3,820	885	657	390
7									3,820	825	667	373
8									4,040	765	710	358
9									3,930	657	710	358
10									3,600	607	d650	342
11									3,160	a550	d650	327
12									2,760	a500	710	327
13									2,380	a450	766	327
14									2,110	a420	710	327
15									2,110	a400	710	312
16												
17									2,110	478	657	298
18									2,110	518	607	283
19									2,110	518	561	270
20									2,380	561	607	283
21									2,960	561	607	298
22												
23									3,270	518	561	298
24									d3,250	518		283
25									d3,000	478	518	270
26									d2,400	478	518	270
27									d1,900	478	518	270
28												
29									d1,500	518	478	243
30									d1,200	667	478	243
31								4,760	d1,200	825	478	230
									d1,200	925	460	218
									d1,200	825	441	230
									-	825	424	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-	-	-
February.....						-	-	-	-	-	-	-
March.....						-	-	-	-	-	-	-
April.....						-	-	-	-	-	-	-
May.....						-	-	-	-	-	-	-
June.....						84,220	4,400	1,200	2,807	167,000		
July.....						21,300	1,250	400	687	42,250		
August.....						19,080	825	424	615	37,840		
September.....						9,426	406	218	314	18,700		
The period.....						-	-	-	-	265,800		

a No gage-height record; discharge computed on basis of records for station at Cascade.

d Doubtful gage-height record; discharge computed on basis of records for station at Cascade.

## Lake Fork of Payette River above reservoir, near McCall, Idaho

Location.- Water-stage recorder, lat. 44°55', long. 116°00', in NW¼ sec. 8, T. 18 N., R. 4 E., three-quarters of a mile downstream from power plant, 2½ miles upstream from Lake Fork Reservoir Dam, and 5 miles east of McCall.

Drainage area.- 54.6 square miles.

Records available.- May 1926 to September 1941 (irrigation seasons only).

Extremes.- Maximum discharge during year, 1,340 second-feet May 13 (gage height, 5.68 feet), from rating curve extended above 1,100 second-feet; minimum not determined, probably occurred during winter.  
1926-41: Maximum discharge observed, 2,520 second-feet June 9, 1933 (gage height, about 7.9 feet, present datum, from high-water mark), from rating curve extended above 1,100 second-feet; practically no flow at times in 1937 and 1939 because of power plant.

Remarks.- Records good except those for periods of ice effect or backwater effect from Lake Fork Reservoir, which are fair. Diurnal fluctuations at low stages caused by power plant of McCall Light & Power Co. and small reservoirs above station. No diversion above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	67				-	159	500	511	172	44	24
2	54	72				-	204	525	461	156	40	27
3	61	71				-	172	625	553	142	38	34
4	67	60				-	145	540	470	134	36	32
5	59	58				-	134	456	422	125	34	32
6	53	62				-	122	354	397	115	32	28
7	50	68				-	119	313	538	115	31	24
8	46	71				-	125	343	457	111	28	24
9	44	86				-	137	315	360	103	30	23
10	40	60				-	151	354	348	95	31	24
11	38	b55				-	130	526	384	92	28	23
12	37	b50	†59			-	125	617	403	90	33	23
13	35	b50				-	125	1,080	387	87	32	23
14	34	b55				-	130	718	381	76	27	23
15	32	61				-	145	540	320	72	24	26
16	31	60				-	124	526	275	69	23	24
17	29	56				-	114	568	258	62	22	23
18	a29	-				-	104	528	403	59	22	22
19	a29	-				-	99	400	610	70	22	23
20	a29	-				-	102	400	416	62	24	26
21	29	-				-	114	500	318	58	25	24
22	28	-				-	132	625	283	55	26	23
23	28	-				-	172	718	265	52	28	23
24	35	-				-	218	800	231	50	31	22
25	165	-				-	241	800	207	48	28	22
26	94	-				-	266	734	189	51	34	21
27	75	-				-	321	670	183	53	36	21
28	63	-				107	354	513	184	59	28	20
29	80	-				119	388	482	196	62	26	20
30	62	-				136	456	590	176	49	26	20
31	56	-				140	-	582	-	45	26	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						1,556	165	26	50.2	3,090		
November 1-17.....						1,042	72	50	61.3	2,070		
December.....						-	-	-	-	-		
Calendar year .....						-	-	-	-	-		
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March 28-31.....						502	140	107	126	996		
April.....						5,308	436	99	177	10,530		
May.....						17,421	1,080	313	562	34,550		
June.....						10,564	610	176	352	20,950		
July.....						2,599	172	45	83.5	5,140		
August.....						915	44	22	29.5	1,810		
September.....						723	34	20	24.1	1,430		
Water year .....						-	-	-	-	-		

† Result of discharge measurement.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

Note.- Backwater from reservoir May 29 to July 2; discharge computed by special slope studies, weather records and records for nearby stations.

## Lake Fork Reservoir near McCall, Idaho

Location.— Staff gage and graduations on concrete gate-control structure of dam on Lake Fork of Payette River, lat. 44°54', long. 116°03', in NW¼NW¼ sec. 13, T. 18 N., R. 3 E., 3 miles east of McCall. Datum of gage is at mean sea level (levels by Lake Irrigation District).

Records available.— April 1926 to September 1941.

Extremes.— Maximum contents observed during year, 19,740 acre-feet June 19 (elevation, 5,118.75 feet); minimum not determined.  
1926-41: Maximum contents observed, that of June 19, 1941; probably no storage during fall and winter.

Remarks.— Reservoir is formed by earth and rock-fill dam, completed in 1926. Capacity, 18,940 acre-feet between elevations 5,101.0 feet (lower limit of capacity table, 4.0 feet above gate sill of outlet) and 5,117.0 feet (top of flashboards, 5.0 feet above spillway crest). Dead storage unknown. Water is used for irrigation of about 6,800 acres of land in vicinity of Norwood. Figures given herein represent usable contents. Gage read once daily.

Cooperation.— Elevation record and capacity table furnished by Lake Irrigation District.

Contents, in acre-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	8,298	17,860	19,010	12,230	6,024
2							-	9,522	17,920	19,970	11,980	5,989
3							-	10,970	18,140	19,890	11,690	5,964
4							-	-	18,200	18,510	11,420	5,954
5							-	13,230	18,050	18,720	11,120	5,931
6							-	13,540	18,200	18,700	10,820	5,919
7							-	13,690	18,360	18,650	10,530	5,908
8							-	13,850	18,520	18,540	10,240	5,896
9							-	13,850	18,440	18,400	10,240	5,880
10							-	13,850	18,200	18,240	9,686	5,838
11							-	-	18,360	18,010	9,379	5,838
12							-	14,460	18,680	17,810	9,108	5,815
13							-	15,390	19,010	17,570	8,919	5,780
14							-	15,390	19,170	17,270	8,703	5,757
15							-	15,110	19,170	16,970	6,541	5,606
16												
17							721	14,800	19,140	16,700	8,298	5,587
18							-	14,770	19,010	16,480	8,028	-
19							-	14,770	19,100	16,180	7,802	-
20							-	15,080	19,740	15,820	7,601	-
21	2,322						-	15,230	19,490	15,510	7,399	5,699
22							-	15,540	19,170	15,220	7,185	-
23							2,364	15,850	19,170	14,910	6,971	-
24							-	16,350	19,170	14,600	6,769	-
25							-	16,750	19,330	14,250	6,505	-
26							3,615	17,250	19,250	13,920	6,476	-
27							-	17,250	19,250	13,620	6,360	5,587
28							-	17,250	19,250	13,330	6,302	-
29							5,606	17,210	19,120	13,100	6,244	5,529
30							6,652	17,020	19,170	12,630	6,186	5,520
31							-	17,290	19,090	12,700	6,128	-
							-	17,730	-	12,440	6,070	-

Monthly elevation and contents, water year October 1940 to September 1941

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
May 31.....	5,117.50	17,730	--
June 30.....	5,118.35	19,090	+1,360
July 31.....	5,114.08	12,440	-6,650
Aug. 31.....	5,109.40	6,070	-6,370

Lake Fork of Payette River below Lake Irrigation District canal, near McCall, Idaho

Location.- Water-stage recorder, lat. 44°54', long. 116°03', in SW¼ sec. 13, T. 18 N., R. 3 E., 300 feet downstream from diversion dam for Lake Irrigation District canal, one-half mile downstream from Lake Fork Reservoir, and 3 miles southeast of McCall.

Records available.- October 1940 to September 1941.

Extremes.- Maximum discharge during year, 1,050 second-feet May 14 (gage height, 5.57 feet); minimum, 3 second-feet Apr. 19 (gage height, 2.10 feet).

Remarks.- Records good. Flow regulated by Lake Fork Reservoir (see p. 173) and Lake Irrigation District canal.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used June 5 to Aug. 21)

2.1	3	3.3	95	4.8	635
2.4	12	3.6	167	5.2	845
2.7	28	4.0	295	5.6	1,080
3.0	53	4.4	450		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a11	14	77	b48	b40	42	154	4	600	154	52	15
2	a11	16	74	b48	39	44	184	5	504	128	52	15
3	a11	16	72	b47	b39	45	205	5	558	108	52	14
4	11	17	70	46	b39	45	212	13	605	90	53	15
5	11	20	67	45	*b39	46	212	123	531	67	56	15
6	11	20	65	44	b39	47	205	302	425	61	56	14
7	11	21	64	44	39	47	199	366	518	60	54	14
8	11	114	62	44	39	47	199	414	585	63	53	14
9	13	208	60	43	40	47	202	430	544	65	53	14
10	13	202	56	b42	40	47	212	430	414	75	50	13
11	13	199	53	b41	43	48	212	482	340	68	45	13
12	11	193	50	b41	43	49	212	675	340	71	36	14
13	12	187	48	40	b42	49	212	960	374	77	31	14
14	14	182	46	40	42	50	212	1,020	422	77	23	14
15	14	176	45	41	b41	49	212	872	418	74	23	14
16	13	173	44	40	b40	48	138	735	382	62	32	15
17	a29	170	44	40	b40	50	6	695	306	63	39	19
18	a58	220	44	42	b39	53	5	489	317	65	35	19
19	a58	359	45	42	38	56	4	306	640	63	28	19
20	a58	295	45	42	38	60	4	370	790	61	29	20
21	58	244	45	42	38	61	5	435	472	58	33	23
22	58	195	45	41	38	62	5	486	306	58	33	24
23	57	156	47	41	38	61	5	504	250	60	33	24
24	56	130	49	41	39	64	5	700	234	60	34	24
25	39	112	50	42	40	67	5	845	215	58	34	24
26	14	97	50	42	b40	71	4	872	187	52	34	24
27	13	88	52	b41	b39	77	5	818	173	51	23	26
28	13	85	51	b41	39	86	4	715	156	46	17	22
29	13	78	49	b41	-	97	4	576	187	45	16	25
30	14	80	49	b40	-	116	4	459	167	49	14	26
31	14	-	49	b40	-	133	-	600	-	52	15	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						745	58	11	24.0	1,480		
November.....						4,063	359	14	135	8,060		
December.....						1,667	77	44	53.8	3,310		
Calendar year .....						-	-	-	-	-		
January.....						1,512	48	40	42.3	2,600		
February.....						1,110	43	38	39.6	2,200		
March.....						1,864	133	42	60.1	3,700		
April.....						5,247	212	4	108	6,440		
May.....						15,712	1,020	4	507	31,150		
June.....						13,941	790	156	398	25,680		
July.....						2,144	154	45	69.2	4,250		
August.....						1,141	56	14	36.8	2,260		
September.....						559	32	13	18.6	1,110		
Water year 1940-41.....						45,505	1,020	4	125	90,250		

a Winter discharge measurement made on this day.

b Incomplete or no gage-height record; discharge computed on basis of gage-height record and assumed time of change of reservoir gates.

c Stage-discharge relation affected by ice.

## Lake Irrigation District canal near McCall, Idaho

Location.- Staff gage, lat. 44°54', long. 116°03', in SW $\frac{1}{4}$  sec. 13, T. 18 N., R. 3 E., 800 feet downstream from head of canal, half a mile south of Lake Fork Reservoir, and 3 miles east of McCall.

Records available.- May 1926 to September 1941.

Extremes.- Maximum discharge observed during year, 144 second-feet July 23-28 (gage height, 4.75 feet); practically no flow during nonirrigation season.  
1926-41: Maximum discharge observed, 150 second-feet June 15-22, 1940; maximum gage height, 4.93 feet July 12-17, 1937; practically no flow during nonirrigation seasons.

Remarks.- Records good. Staff gage read once or twice a day. No diversions between head and station. Canal diverts water from right bank of Lake Fork of Payette River in SW $\frac{1}{4}$  sec. 13, T. 18 N., R. 3 E., for irrigation of 6,800 acres of land near McCall and Norwood, in the Lake Irrigation District project.

Cooperation.- Gage-height record furnished by watermaster for Lake Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									8	63	112	31
2									8	69	108	28
3									8	73	107	23
4									9	74	107	21
5									8	74	110	20
6									8	76	112	19
7									11	92	112	17
8									14	86	112	17
9									14	91	112	15
10									14	101	112	14
11		0							13	106	112	14
12								0	20	108	112	16
13									27	114	106	17
14									35	119	97	17
15									39	124	98	17
16									40	130	102	16
17									43	136	100	a13
18									46	140	98	a13
19									49	140	92	a13
20									43	140	84	11
21		5							42	140	80	a8
22		a5							43	140	79	a8
23		a5						1	47	143	75	a8
24								3	50	144	65	a7
25								3	65	144	56	a7
26								3	74	144	51	8
27								3	79	144	44	a8
28								4	79	135	40	8
29								4	75	120	36	8
30								5	68	113	34	8
31								7	-	112	33	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				18	5	0	0.5	30				
November.....				0	0	0	0	0				
December.....				0	0	0	0	0				
Calendar year 1940.....				11,131	150	0	30.4	22,090				
January.....				0	0	0	0	0				
February.....				0	0	0	0	0				
March.....				0	0	0	0	0				
April.....				0	0	0	0	0				
May.....				33	7	0	1.1	65				
June.....				1,079	79	8	36.0	2,140				
July.....				3,525	144	63	114	6,990				
August.....				2,698	112	53	87.0	5,360				
September.....				430	31	7	14.3	853				
Water year 1940-41.....				7,780	144	0	21.3	15,430				

a No gage-height record; discharge computed on basis of information furnished by watermaster and known headgate changes.

## PAYETTE RIVER BASIN

Porter Creek near Gardena, Idaho

Location.— Staff gage, lat. 43°57', long. 116°11', in NE¼ sec. 14, T. 7 N., R. 2 E., at Hood ranch house, 0.6 mile upstream from mouth and 2 miles south of Gardena.

Drainage area.— 21.2 square miles.

Records available.— November 1938 to September 1941.

Extremes.— Maximum discharge during year, 181 second-feet Aug. 11 (gage height, 3.58 feet from floodmark), from rating curve extended above 60 second-feet; no flow July 22-27, Aug. 10.

1938-41: Maximum discharge observed, that of Aug. 11, 1941; no flow at times.

Remarks.— Records fair except those for periods of ice effect, those for periods of no gage-height record, and those for July to September, which are poor. Gage read twice daily. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	4.5	5.6	b3.8	6.3	18	15	18	11	a2.0	0.1	1.6
2	2.7	9.2	5.4	b3.4	6.3	19	16	18	11	a1.5	.1	1.8
3	2.7	6.5	5.2	b3.2	5.9	16	17	25	11	a1.0	.1	2.0
4	2.7	5.2	5.2	b3.5	5.9	15	18	25	10	1.1	.1	3.0
5	2.6	4.5	5.0	b4.0	5.9	16	21	23	10	1.6	.1	2.6
6	2.4	4.5	5.0	b4.5	5.9	13	a19	22	8.6	1.9	.1	2.4
7	2.3	5.4	4.9	4.5	8.1	13	17	19	22	1.6	.1	2.3
8	2.2	5.8	4.9	4.2	6.5	13	17	20	28	1.6	.1	2.2
9	2.2	5.6	4.5	4.5	7.7	13	17	19	24	1.0	.1	2.1
10	2.2	4.9	b4.0	4.4	9.2	13	32	17	21	.6	0	2.0
11	2.2	4.5	b3.5	3.9	12	13	24	17	19	.3	a5	2.2
12	2.2	b4.0	b3.2	4.2	14	12	23	22	17	.2	2.6	2.2
13	2.2	b3.3	b3.0	4.5	10	11	23	19	13	.2	2.3	2.4
14	2.2	b3.3	b3.5	*5.8	9.7	11	22	28	14	.3	3.1	2.4
15	2.2	*3.7	*b4.3	4.5	8.9	11	22	20	13	.3	2.3	2.7
16	2.3	*3.9	b4.7	4.2	8.6	10	20	16	12	.3	2.7	2.8
17	2.2	4.2	4.9	4.5	8.6	11	19	12	11	.2	3.0	2.8
18	2.2	3.9	5.0	4.7	8.1	12	18	12	13	.1	3.7	2.3
19	2.2	3.8	4.2	4.9	8.6	12	17	13	15	a.1	2.1	1.8
20	2.2	4.1	4.5	5.9	8.4	11	16	11	12	a.1	1.8	3.0
21	2.2	a4.3	4.2	5.4	8.4	11	15	9.2	11	.1	1.8	2.6
22	2.3	b3.5	4.2	5.4	9.7	11	16	8.1	a1.0	0	2.3	1.8
23	2.2	b3.2	5.0	5.8	10	10	15	7.2	a8	0	.9	2.8
24	2.3	3.8	4.5	6.1	15	10	15	6.8	a6	0	1.3	2.6
25	*3.8	3.7	4.5	9.4	12	9.4	18	7.7	a5	0	1.9	3.2
26	2.9	3.7	4.4	10	11	9.4	19	8.4	a4	0	1.3	3.7
27	2.9	3.7	7.2	7.7	11	9.7	20	11	a3.5	0	.9	2.7
28	2.9	4.4	4.9	7.0	15	10	19	10	a3.5	.3	1.1	2.1
29	3.4	9.7	4.9	6.5	-	16	20	16	a*.5	.3	1.0	2.6
30	3.5	5.9	4.9	6.5	-	17	18	11	a2.5	.2	a1.0	3.4
31	3.9	-	4.5	6.1	-	16	-	13	-	.2	1.1	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						78.8	3.9	2.2	2.54	156		
November.....						140.7	9.7	3.2	4.69	279		
December.....						143.7	5.6	3.0	4.64	285		
Calendar year 1940.....						3,716.6	82	0	10.2	7,380		
January.....						163.0	10	3.2	5.26	323		
February.....						256.7	15	5.9	9.17	509		
March.....						321.5	19	9.4	12.6	777		
April.....						568	32	15	18.9	1,130		
May.....						484.4	28	6.8	15.6	961		
June.....						352.6	28	2.5	11.8	699		
July.....						17.1	2.0	0	.55	34		
August.....						44.1	5	0	1.42	87		
September.....						74.1	3.7	1.6	2.47	147		
Water year 1940-41.....						2,714.7	32	0	7.44	5,390		

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Johnson Creek at Yellow Pine, Moore Creek near Arrowrock, and weather records.

b Stage-discharge relation affected by ice.

## Weiser River at Tamarack, Idaho

Location.- Staff gage, lat. 44°57', long. 116°23', in sec. 30, T. 19 N., R. 1 E., 0.4 mile southeast of Tamarack.

Drainage area.- 36.5 square miles.

Records available.- September 1936 to September 1941.

Extremes.- Maximum discharge observed during year, 330 second-feet Apr. 3 (gage height, 4.02 feet); minimum observed, 5.3 second-feet Oct. 15-20 (gage height, 0.84 foot). 1936-41: Maximum discharge observed, 775 second-feet Mar. 27, 1940 (gage height, 6.00 feet), from rating curve extended above 600 second-feet; minimum observed, 1.7 second-feet July 30, 1938, while water was being stored in millpond (gage height, 0.52 foot).

Remarks.- Records good except those for periods of ice effect or backwater from beaver dams which are fair. Gage read twice daily. No diversions or regulation. Small flow from Boulder Creek in Salmon River Basin enters Weiser River above station through trans-mountain diversion during late irrigation season.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	17	11	b10	b9.1	28	262	32	27	22	8.8	7.7
2	12	26	10	b9	8.8	52	295	37	25	19	8.2	7.9
3	15	28	11	b10	b8.5	70	312	87	27	18	8.2	8.2
4	16	23	10	11	b8.5	70	278	87	26	17	7.7	8.8
5	9.4	23	10	11	b8.5	66	295	87	26	16	7.7	7.7
6	6.9	21	10	10	9.1	62	246	82	23	15	7.2	8.2
7	7.2	34	9.8	10	9.1	66	216	74	42	14	7.9	7.7
8	6.7	45	9.8	9.8	8.8	70	202	70	62	13	7.2	7.7
9	6.2	38	9.4	9.8	9.1	78	188	62	49	12	7.4	7.9
10	5.7	35	9.4	9.1	9.1	78	188	62	49	12	7.4	7.7
11	5.7	32	b8.5	9.1	9.4	78	188	52	45	e11	7.7	c7.5
12	6.0	28	b7.0	9.1	9.4	78	175	48	38	e11	7.4	
13	5.7	30	b6.0	9.1	9.1	74	168	48	34	e10	7.7	
14	5.5	21	b6.0	9.1	9.1	66	162	52	32	e9.0	7.2	
15	5.3	17	b6.5	9.8	9.4	62	156	48	30	e9.0	7.2	
16	5.3	16	b7.5	9.1	9.1	70	144	38	28	e8.0	6.9	c7.5
17	5.3	17	8.2	9.1	9.1	87	127	38	27	e8.0	6.9	
18	5.3	17	8.5	9.1	9.1	122	111	42	34	e7.0	6.7	
19	5.3	14	9.1	9.8	8.8	127	96	36	58	e7.0	6.7	
20	5.3	13	11	9.1	9.1	132	92	31	52	e8.0	6.7	
21	5.7	14	12	9.1	9.8	132	87	26	42	e7.0	6.7	7.2
22	5.7	11	13	9.1	10	122	87	26	38	e7.0	7.2	
23	5.7	b10	19	9.1	10	111	87	25	34	e7.0	7.4	
24	6.2	12	23	9.1	13	127	92	24	32	e7.0	7.9	
25	11	11	18	10	15	138	92	22	30	e7.0	7.2	
26	13	11	13	10	20	180	92	23	28	e8.0	7.4	6.9
27	10	10	14	b18	12	162	92	30	27	12	8.2	6.9
28	6.2	10	24	12	15	175	92	30	26	12	8.2	6.9
29	9.1	10	19	12	-	202	87	25	26	12	7.2	6.9
30	12	14	12	11	-	246	82	26	24	10	7.4	6.9
31	14	-	11	b9.1	-	262	-	27	-	9.4	8.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						251.4	15	5.3	8.11	499		
November.....						608	45	10	20.3	1,210		
December.....						356.7	24	6.0	11.5	708		
Calendar year 1940.....						17,122.1	725	3.7	46.8	33,960		
January.....						308.6	16	9.0	9.95	612		
February.....						285.0	20	8.5	10.2	565		
March.....						3,363	262	28	108	6,670		
April.....						4,791	312	82	160	9,500		
May.....						1,489	87	22	48.4	2,970		
June.....						1,028	58	25	34.3	2,040		
July.....						344.4	22	7	11.1	683		
August.....						231.8	8.8	6.7	7.48	460		
September.....						226.2	-	6.9	7.54	449		
Water year 1940-41.....						13,293.1	312	5.3	36.4	26,370		

b Stage-discharge relation affected by ice.

c Backwater from beaver dams; discharge computed on basis of weather records and records for other stations in basin.

## Weiser River at Starkey, Idaho

Location.- Water-stage recorder, lat. 44°51', long. 116°27', in sec. 34, T. 18 N., R. 1 W., at Starkey Hot Springs (Starkey post office), 10 miles north of Council.

Drainage area.- 106 square miles.

Records available.- August to September 1920, March 1939 to September 1941.

Extremes.- Maximum discharge during year, 690 second-feet Apr. 3 (gage height, 3.91 feet); minimum, 13 second-feet Sept. 29 (gage height, 1.32 feet).

1920, 1939-41: Maximum discharge, 2,450 second-feet Mar. 27, 1940 (gage height, 6.00 feet), from logarithmic extension of rating above 700 second-feet; minimum, 8.0 second-feet Aug. 31, 1939, Aug. 23, 1940; minimum gage height, 1.04 feet Aug. 31, 1939.

Remarks.- Records good except those for periods of missing gage-height record, which are fair. Several small diversions from river and tributaries above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

1.3	12	2.5	150	3.7	585
1.6	28	2.8	223	4.0	735
1.9	56	3.1	327		
2.2	98	3.4	452		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	84	42	42	46	144	554	359	135	83	24	21
2	37	124	40	36	46	198	630	355	128	75	22	22
3	59	133	41	39	43	217	655	438	135	75	22	23
4	49	109	40	52	42	201	605	448	129	65	21	21
5	34	94	41	52	42	190	600	413	124	59	20	23
6	29	89	40	50	44	183	536	359	124	64	18	21
7	26	100	39	47	47	183	474	308	169	60	18	20
8	24	137	39	48	45	196	430	300	195	47	18	a20
9	23	126	40	40	46	212	428	272	190	45	17	a20
10	22	111	27	39	47	212	470	254	178	40	17	20
11	21	96	26	37	53	226	461	258	169	39	18	20
12	21	76	22	34	55	217	430	275	160	36	21	21
13	21	66	19	39	52	201	418	286	152	31	20	21
14	21	73	22	38	51	185	413	258	146	30	19	20
15	20	66	28	38	49	176	409	220	139	28	18	21
16	20	63	30	37	48	161	375	198	129	27	17	20
17	20	60	39	37	51	212	327	190	124	26	18	20
18	20	59	50	40	50	286	286	185	144	24	18	20
19	20	52	51	41	52	312	251	160	232	26	20	26
20	20	48	51	41	52	304	229	144	206	26	19	26
21	20	50	49	41	53	297	223	140	181	24	19	22
22	20	40	51	42	56	289	229	139	163	24	18	21
23	21	35	62	43	62	264	242	139	148	23	19	20
24	27	48	77	46	89	258	272	146	139	22	19	20
25	84	44	80	53	90	282	289	144	131	24	a20	20
26	60	37	72	56	84	312	304	146	122	24	a22	20
27	49	40	90	52	83	351	327	154	114	30	a25	20
28	43	40	80	51	98	409	335	140	100	37	a25	20
29	47	45	68	47	-	439	331	129	101	35	a25	18
30	58	48	62	48	-	549	335	140	92	32	22	19
31	80	-	56	48	-	572	-	140	-	28	21	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	1,046					84	26	33.7	2,070			
November.....	2,192					137	35	73.1	4,350			
December.....	1,474					90	19	47.5	2,920			
Calendar year 1940.....	50,608.5					2,090	8.8	138	100,400			
January.....	1,354					56	34	43.7	2,690			
February.....	1,576					98	42	56.3	3,130			
March.....	8,267					572	144	266	16,380			
April.....	11,876					665	223	396	22,550			
May.....	7,225					448	129	233	14,330			
June.....	4,399					232	92	147	8,730			
July.....	1,187					83	22	38.3	2,360			
August.....	620					26	17	20.0	1,230			
September.....	625					26	18	20.8	1,240			
Water year 1940-41.....	41,832					665	17	115	82,980			

a No gage-height record; discharge computed on basis of weather records and records for other stations in the basin.



## Weiser River near Council, Idaho

Location.- Water-stage recorder, lat. 44°41', long. 116°29', in sec. 29, T. 16 N., R. 1 W., 0.7 mile downstream from Cottonwood Creek, 2 miles upstream from Middle Fork of Weiser River, and 3½ miles southwest of Council.

Drainage area.- 390 square miles.

Records available.- April 1937 to September 1941.

Extremes.- Maximum discharge during year, 1,940 second-feet Mar. 1 (gage height, 6.10 feet); minimum, 34 second-feet July 19 (gage height, 1.09 feet).  
1937-41: Maximum discharge observed, 6,700 second-feet Mar. 16 or 17, 1938 (gage height, 7.6 feet from floodmark, site and datum then in use), from rating curve extended above 3,500 second-feet; minimum, 22 second-feet June 29, 1940 (gage height, 0.89 foot).

Remarks.- Records good. Flow partly regulated by Lost Valley Reservoir. (see p.184) and other reservoirs. Many diversions above station for irrigation.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 26					Dec. 27 to Sept. 30				
1.2	41	2.6	291		1.0	28	3.8	685	
1.4	65	2.9	372		1.4	65	4.2	850	
1.7	105	3.2	482		1.8	124	4.8	1,040	
2.0	156	3.6	595		2.2	205	5.0	1,250	
2.3	219				2.6	303	5.4	1,450	
					3.0	417	5.8	1,730	
					3.4	546	6.1	1,940	

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	276	143	260	264	1,390	1,280	990	530	262	82	96
2	119	578	149	228	257	1,630	1,390	1,020	498	238	77	108
3	164	527	149	b190	235	1,450	1,610	1,200	513	242	79	110
4	152	384	147	226	223	1,200	1,420	1,220	496	212	61	106
5	113	317	147	221	216	1,060	1,610	1,140	464	196	76	101
6	94	330	145	214	223	1,040	1,330	1,020	448	187	72	101
7	83	401	143	210	235	965	1,170	918	615	154	66	96
8	76	510	136	194	228	990	1,040	895	705	129	65	96
9	70	446	131	179	233	990	1,020	828	668	116	66	96
10	67	372	107	b160	264	918	1,200	785	615	104	63	95
11	63	325	102	b150	496	872	1,250	805	580	91	66	94
12	61	268	b70	b150	546	805	1,140	850	546	79	70	95
13	61	228	b65	b170	448	725	1,120	872	513	65	77	98
14	57	224	b70	177	384	650	1,060	828	480	58	75	96
15	56	206	b75	170	352	615	1,060	725	432	51	73	95
16	55	197	b80	164	311	615	990	668	405	47	72	92
17	52	183	b85	162	327	685	895	650	372	43	70	81
18	50	196	b130	177	316	850	806	632	432	38	76	68
19	49	172	b170	196	325	895	725	546	705	56	85	110
20	50	158	206	201	358	872	685	496	598	66	86	106
21	49	162	189	212	384	628	668	480	496	65	88	101
22	50	140	204	219	480	805	668	464	446	64	86	96
23	50	119	336	226	530	745	685	480	402	63	88	95
24	68	143	494	293	1,120	685	725	513	372	59	89	94
25	230	140	544	771	872	705	765	530	350	63	96	92
26	152	121	510	940	685	745	805	513	319	65	104	92
27	128	130	1,330	563	615	805	872	580	308	91	106	91
28	113	130	650	448	785	918	872	546	314	106	100	89
29	131	147	464	372	-	990	895	480	327	104	98	89
30	186	160	396	325	-	1,250	918	513	295	92	98	91
31	268	-	333	293	-	1,300	-	530	-	88	98	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						3,017	268	49	97.3		5,980	
November.....						7,699	575	119	257		15,270	
December.....						7,914	1,330	65	255		15,700	
Calendar year 1940.....						158,067	3,780	24	432		313,500	
January.....						8,461	940	150	273		16,780	
February.....						11,712	1,120	216	418		23,230	
March.....						28,993	1,630	615	935		57,510	
April.....						30,473	1,610	668	1,016		60,440	
May.....						22,717	1,220	464	733		45,060	
June.....						14,244	705	295	475		28,260	
July.....						3,295	262	38	106		6,540	
August.....						2,535	106	63	81.8		5,030	
September.....						2,896	110	88	96.5		5,740	
Water year 1940-41.....						143,956	1,630	38	394		285,500	

b Stage-discharge relation affected by ice.

## Weiser River near Cambridge, Idaho

Location.- Water-stage recorder, lat. 44°35', long. 116°38', in NE¼ sec. 1, T. 14 N., R. 3 W., 2½ miles northeast of Cambridge.

Drainage area.- 605 square miles.

Records available.- March 1939 to September 1941.

Extremes.- Maximum discharge during year, 3,870 second-feet Dec. 27 (gage height, 6.82 feet); minimum, 61 second-feet Aug. 11 (gage height, 1.32 feet).

1939-41: Maximum discharge, 6,670 second-feet Mar. 31, 1940 (gage height, 8.30 feet); minimum, 25 second-feet Sept. 3, 1940 (gage height, 0.99 foot).

Remarks.- Records good. Flow partly regulated by Lost Valley Reservoir (see p. 184) and other reservoirs. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170	451	239	430	426	2,080	1,590	1,560	990	442	108	105
2	135	990	253	338	403	2,480	1,740	1,620	930	406	100	116
3	253	900	270	284	365	2,170	1,900	1,900	930	399	97	132
4	255	617	258	341	341	1,740	1,780	1,990	900	355	97	132
5	185	480	253	334	328	1,480	2,080	1,860	840	321	89	130
6	152	510	234	321	331	1,420	1,780	1,700	782	293	85	127
7	136	564	236	306	358	1,510	1,560	1,480	1,120	264	74	122
8	123	810	231	284	355	1,280	1,420	1,480	1,240	236	72	118
9	113	671	218	261	358	1,240	1,360	1,420	1,120	199	69	115
10	106	560	190	242	434	1,180	1,560	1,380	990	185	66	111
11	103	476	145	228	990	1,120	1,660	1,480	960	160	65	111
12	102	395	108	234	1,120	1,050	1,520	1,660	900	149	97	111
13	97	318	102	261	900	960	1,450	1,780	870	141	100	115
14	94	315	106	267	702	840	1,450	1,620	840	122	92	110
15	90	299	108	253	631	782	1,450	1,420	755	113	83	108
16	90	284	123	234	542	782	1,340	1,310	692	108	78	103
17	89	276	145	231	546	840	1,240	1,280	641	103	74	102
18	86	284	197	242	528	1,020	1,120	1,240	728	94	89	100
19	83	253	272	267	519	1,080	1,020	1,080	1,280	89	102	120
20	83	234	315	287	583	1,080	960	990	1,080	102	113	134
21	83	236	299	309	661	1,020	960	990	870	100	111	127
22	82	216	315	328	870	1,020	960	990	782	94	108	122
23	82	177	569	338	990	960	1,020	1,020	702	90	106	115
24	94	199	900	467	1,900	900	1,120	1,080	646	88	106	113
25	376	208	960	1,210	1,620	900	1,180	1,120	612	83	110	113
26	261	185	930	1,940	1,180	960	1,240	1,080	550	86	120	113
27	211	188	2,650	1,120	1,020	1,050	1,340	1,180	519	113	129	111
28	161	192	1,240	840	1,240	1,180	1,380	1,080	550	156	122	110
29	199	219	840	661	-	1,240	1,420	930	574	151	115	108
30	321	261	687	560	-	1,560	1,480	960	514	129	110	111
31	399	-	569	493	-	1,620	-	1,020	-	113	108	-
Month	Second-foot-days					Maximum	Minimum	Mean	Run-off in acre-feet			
October.....	4,882					399	82	157	9,680			
November.....	11,769					990	177	392	23,540			
December.....	13,962					2,650	102	450	27,690			
Calendar year 1940.....	260,932					6,440	27	713	517,600			
January.....	13,911					1,940	228	449	27,590			
February.....	20,241					1,900	328	723	40,150			
March.....	38,344					2,480	782	1,237	76,050			
April.....	42,100					2,080	960	1,403	85,500			
May.....	41,700					1,990	950	1,345	82,710			
June.....	24,907					1,280	514	830	49,400			
July.....	5,482					442	83	177	10,870			
August.....	2,993					129	65	96.5	5,940			
September.....	3,465					132	100	116	6,870			
Water year 1940-41.....	223,756					2,650	65	613	443,800			

## Weiser River above Crane Creek, near Weiser, Idaho

Location.- Water-stage recorder, lat. 44°18', long. 116°48', in sec. 10, T. 11 N., R. 4 W., 1 mile upstream from Crane Creek and 9 miles northeast of Weiser.

Drainage area.- 1,160 square miles.

Records available.- July 1920 to September 1941.

Average discharge.- 20 years (1921-41), 811 second-feet.

Extremes.- Maximum discharge during year, 6,580 second-feet Dec. 27 (gage height, 6.65 feet); minimum, 42 second-feet July 20 (gage height, 0.95 foot).

1920-41: Maximum discharge, 16,900 second-feet Mar. 19, 1932 (gage height, 10.8 feet from floodmarks), from rating curve extended above 9,000 second-feet by logarithmic plotting; minimum, 5 second-feet (estimated) Aug. 11 to Sept. 10, 1931.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Several reservoirs and many diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	288	696	489	a800	858	4,280	2,180	2,180	1,820	752	150	154
2	325	1,490	483	a650	775	4,700	2,330	1,490	681	147	164	164
3	421	1,590	564	a550	723	4,440	2,430	2,360	1,450	646	137	193
4	507	1,150	558	a650	681	3,460	2,430	2,780	1,460	611	137	204
5	395	642	513	b618	639	2,860	2,930	2,640	1,350	544	140	201
6	325	798	489	a600	646	2,640	2,640	2,360	1,280	477	121	189
7	280	850	465	a560	689	2,360	2,300	2,100	1,600	410	110	178
8	241	1,240	443	a520	775	2,300	2,040	2,040	2,040	349	98	171
9	212	1,080	a420	a470	775	2,230	1,920	2,040	1,800	288	86	171
10	193	888	a350	a450	858	2,040	2,040	1,920	1,600	246	80	168
11	182	775	a280	a400	2,210	1,920	2,500	2,040	1,600	221	71	160
12	171	688	a220	h410	3,160	1,740	2,230	2,360	1,440	168	73	154
13	164	558	a200	a450	2,500	1,620	2,040	2,640	1,370	147	107	154
14	154	507	a210	a460	1,620	1,440	1,980	2,570	1,330	124	116	157
15	147	495	bh220	a450	1,430	1,330	1,980	2,230	1,220	104	107	157
16	144	471	a250	a430	1,160	1,280	1,860	1,980	1,090	86	98	154
17	140	448	a300	a410	1,130	1,320	1,740	1,920	1,020	71	93	154
18	137	448	a400	a430	1,180	1,490	1,550	1,860	976	66	104	150
19	131	438	a550	h465	1,080	1,630	1,420	1,630	1,650	58	118	150
20	128	396	a600	a500	1,210	1,600	1,320	1,430	1,600	51	137	189
21	124	379	a580	a540	1,490	1,510	1,280	1,410	1,340	66	154	189
22	124	374	bh600	a570	2,040	1,460	1,280	1,460	1,170	78	147	186
23	121	330	a1,100	a600	2,360	1,410	1,310	1,510	1,040	68	147	178
24	134	316	h1,740	a800	3,940	1,270	1,420	1,620	952	71	134	171
25	293	346	a1,900	2,470	4,440	1,240	1,520	1,800	896	68	140	171
26	519	330	a1,800	5,050	2,710	1,280	1,600	1,680	835	68	180	168
27	374	316	a6,000	2,860	2,230	1,380	1,740	1,800	790	85	185	164
28	321	336	a2,500	1,860	2,430	1,510	1,860	1,740	850	131	189	164
29	311	359	h1,520	1,400	-	1,630	1,860	1,600	920	249	178	160
30	471	551	a1,200	1,110	-	2,040	1,980	1,480	858	228	171	157
31	564	-	a1,000	976	-	2,160	-	1,630	-	189	164	-
Month	Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet			
October.....	8,041		564		121		259		15,950			
November.....	19,461		1,590		316		649		38,600			
December.....	27,924		6,000		200		901		55,390			
Calendar year 1940.....	435,917		14,000		26		1,191		864,600			
January.....	28,489		5,050		400		919		56,510			
February.....	46,738		4,440		639		1,634		90,720			
March.....	63,570		4,700		1,240		2,051		126,100			
April.....	57,590		2,930		1,280		1,920		114,200			
May.....	80,990		2,780		1,410		1,967		121,000			
June.....	38,637		2,040		790		1,288		76,640			
July.....	7,380		752		51		238		14,640			
August.....	4,002		189		71		129		7,940			
September.....	5,079		204		150		169		10,070			
Water year 1940-41.....	366,901		6,000		51		1,005		727,800			

a No gage-height record; discharge computed on basis of weather records and records for other Weiser River stations.

b Stage-discharge relation affected by ice.

c Computed from staff gage readings.

## WEISER RIVER BASIN

East Fork of Weiser River near Council, Idaho

Location.- Water-stage recorder, lat. 44°46', long. 116°16', in SE¼ sec. 31, T. 17 N., R. 2 E., three-quarters of a mile southwest of Squaw Creek ranger station and 9 miles northeast of Council. Datum of gage is 6,224.1 feet above mean sea level.

Drainage area.- 2.0 square miles.

Records available.- September 1932 to September 1941 (fragmentary).

Extremes.- Maximum discharge recorded during year, 57 second-feet May 24 (gage height, 3.10 feet); probably no flow at times during winter.  
1932-41: Maximum discharge recorded, 77 second-feet June 16, 1938, from rating curve extended above 50 second-feet; maximum gage height recorded, 4.11 feet June 9, 1933 (ice affected); no flow Apr. 8, 1937, and probably no flow at times during each winter from 1938 to 1941.

Remarks.- Records fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	1.5					-	8.1	31	13	2.0	0.9
2	1.7	1.7					-	8.8	32	12	1.8	
3	1.5	1.7					-	15	35	11	1.4	.8
4	1.4	1.5					-	13	33	10	1.3	.8
5	1.3	-					-	12	32	9.7	1.2	.8
6	1.2	-					-	11	31	9.0	1.3	.7
7	1.2	-					-	9.9	37	8.8	1.2	.7
8	1.2	-					-	11	30	7.7	1.2	.7
9	1.1	-					b0.5	11	26	7.0	1.2	.7
10	1.1	-					b.6	13	27	6.8	1.2	.7
11	1.1	-					b.7	18	30	6.0	1.7	.7
12	1.1	-					b.8	27		5.8	1.8	.7
13	1.1	-					b.9	31		5.2	1.5	.8
14	1.1	-					1.1	27		5.0	1.3	.8
15	1.0	-					1.2	25		4.9	1.3	.8
16	.9	-					1.2	26		4.5	1.3	.8
17	.9	-					1.2	27	a32	4.1	1.3	.8
18	.8	-					1.2	24		a3.5	1.4	.9
19	.8	-					1.1	21		a3.0	1.4	.9
20	.8	-					1.1	21		a3.5	1.4	.9
21	.8	-					1.1	25		a3.2	1.2	.9
22	.8	-					1.2	29	28	a2.9	1.2	.8
23	.8	-					1.3	34	25	a2.6	1.1	.8
24	.9	-					1.5	44	22	2.4	1.1	.8
25	5.6	-					1.8	45	20	2.4	1.1	.8
26	3.0	-						43	18	2.5	1.2	.7
27	2.4	-						3.3	37	17	4.1	1.1
28	2.0	-						4.1	31	16	3.0	1.0
29	1.9	-						4.9	31	15	2.5	1.0
30	1.8	-						6.6	34	14	2.1	1.0
31	1.7	-					-	34	-	2.1	.9	-
Month		Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off					
							Inches		Acres	Feet		
October.....		44.1	5.6	0.8	1.42	0.710	0.82			87		
November.....		-	-	-	-	-	-	-	-	-		
December.....		-	-	-	-	-	-	-	-	-		
Calendar year .....		-	-	-	-	-	-	-	-	-		
January.....		-	-	-	-	-	-	-	-	-		
February.....		-	-	-	-	-	-	-	-	-		
March.....		-	-	-	-	-	-	-	-	-		
April 9-30.....		39.4	6.6	.5	1.79	.895	.73			78		
May.....		746.8	45	8.1	24.1	12.0	13.83			1,480		
June.....		839	-	14	28.0	14.0	15.62			1,660		
July.....		169.9	13	2.1	5.48	2.74	3.16			337		
August.....		40.1	2.0	.9	1.29	.645	.74			80		
September.....		23.4	.9	.7	.78	.390	.44			46		
Water year .....		-	-	-	-	-	-	-	-	-		

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

b Stage-discharge relation affected by ice.

## West Fork of Weiser River near Fruitvale, Idaho

Location.- Staff gage, lat. 44°50', long. 116°28', in W $\frac{1}{2}$  sec. 9, T. 17 N., R. 1 W., at Taylor Ranch,  $\frac{1}{4}$  miles northwest of Fruitvale and  $\frac{1}{4}$  miles upstream from mouth. Prior to Oct. 12, 1940, at datum 1.00 foot higher.

Drainage area.- 78 square miles.

Records available.- October 1910 to January 1913, October 1919 to September 1925, April 1937 to September 1941.

Extremes.- Maximum discharge observed during year, 350 second-feet Apr. 3; maximum gage height observed, 3.57 feet Mar. 2 and Apr. 3; minimum discharge observed, 2 second-feet July 16-18.

1910-13, 1919-25, 1937-41: Maximum discharge observed, 1,170 second-feet Mar. 31, 1940 (gage height, 4.79 feet, present datum); minimum discharge, 0.5 second-foot July 23-27, 1911.

Remarks.- Records fair. Gage read twice daily. Several diversions both above and below station for irrigation. Flow regulated by Lost Valley Reservoir (see p. 184).

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	55	20	61	38	230	278	290	107	38	54	46
2	21	139	20	42	38	265	305	290	97	40	53	46
3	40	132	17	42	31	230	350	335	94	42	56	46
4	30	100	21	63	30	177	265	320	89	34	56	46
5	20	85	21	62	31	168	265	320	90	30	52	46
6	14	76	22	60	35	177	241	320	89	24	53	46
7	12	114	19	53	38	168	208	290	114	24	48	44
8	12	150	14	46	35	187	187	265	160	20	46	44
9	12	129	13	48	38	177	218	241	169	16	42	44
10	12	108	6	40	35	159	278	218	160	12	42	44
11	10	98	8	44	51	169	278	208	139	10	44	44
12	10	83	30	44	52	150	290	82	128	9	50	44
13	9	64	19	48	55	131	290	98	117	6	48	44
14	7	58	18	44	53	116	290	116	106	6	44	44
15	6	55	33	42	44	108	278	123	94	3	42	44
16	6	44	34	38	42	104	278	120	88	2	44	44
17	6	46	51	40	46	105	253	114	79	2	44	44
18	6	44	76	44	44	159	230	128	79	22	44	44
19	6	29	72	44	46	187	208	110	110	50	46	50
20	6	31	64	46	50	159	187	105	101	52	44	46
21	6	33	60	48	53	150	177	87	89	53	44	44
22	6	16	60	50	53	150	177	69	82	48	46	44
23	6	23	62	52	63	131	187	67	79	48	48	44
24	6	30	110	54	131	118	197	66	70	46	46	44
25	24	24	112	82	111	112	216	70	64	53	46	44
26	15	21	108	90	89	126	230	67	60	53	48	44
27	14	23	136	70	76	159	253	82	62	57	48	44
28	12	22	112	70	116	177	241	103	57	63	46	44
29	17	23	90	67	-	187	241	72	58	58	46	46
30	26	23	82	42	-	278	265	72	46	48	46	42
31	52	-	72	37	-	265	-	75	-	53	46	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						439	52	6	14.2		871	
November.....						1,878	150	16	62.6		3,720	
December.....						1,601	136	6	61.6		3,180	
Calendar year 1940.....						37,488	1,170	4	102		74,360	
January.....						1,613	90	37	52.0		3,200	
February.....						1,528	131	30	54.6		3,030	
March.....						5,169	278	104	167		10,250	
April.....						7,363	350	177	245		14,600	
May.....						4,923	335	66	159		9,760	
June.....						2,846	159	46	94.9		5,640	
July.....						1,022	63	2	33.0		2,030	
August.....						1,462	56	42	47.2		2,900	
September.....						1,340	50	42	44.7		2,660	
Water year 1940-41.....						31,184	350	2	85.4		61,840	

## WEISER RIVER BASIN

Lost Valley Reservoir near Tamarack, Idaho

Location.- Staff gage, lat.  $44^{\circ}57'30''$ , long.  $116^{\circ}28'$ , in sec. 28, T. 19 N., R. 1 W., a short distance upstream from outlet gates near left end of dam on Lost Creek, 4 miles west of Tamarack, and 16 miles north of Council.

Drainage area.- 29.4 square miles.

Records available.- May to September 1924, May 1926 to September 1941.

Extremes.- Maximum gage height observed during year, 26.60 feet June 5; minimum observed, 13.17 feet Oct. 7.  
1924, 1926-41: Maximum gage height observed, 26.90 feet May 14, 1940; gage not read when reservoir was nearly empty.

Remarks.- Reservoir is formed by earth dam completed in 1910 and raised 6 feet in 1929. Permanent spillway crest is at gage height 22.26 feet; during 1938 temporary flash-board structure was raised to permit storage to gage height about 26 feet. Water is used for irrigation of lands in Weiser River Basin.

Cooperation.- Gage-height record furnished by Lost Valley Reservoir Co.

Gage height, in feet, water year October 1940 to September 1941

[illegible]

## Lost Creek near Tamarack, Idaho

Location.- Water-stage recorder, lat. 44°57', long. 116°28', in sec. 28, T. 19 N., R. 1 W., a quarter of a mile downstream from dam of Lost Valley Reservoir, 4 miles west of Tamarack, and 16 miles north of Council.

Drainage area.- 29.4 square miles.

Records available.- January 1910 to August 1914, May 1920 to September 1921, May 1924 to September 1941.

Average discharge.- 11 years (1930-41), 32.4 second-feet.

Extremes.- Maximum discharge during year, 193 second-feet May 5 (gage height, 2.62 feet); practically no flow Dec. 7-10.  
1910-14, 1920-21, 1924-41: Maximum discharge, about 688 second-feet May 17, 18, 1921 (gage height, 4.29 feet); practically no flow at times when gates in dam were closed.

Remarks.- Records good except those for periods of no gage-height record, which are fair.  
No diversion between reservoir and station; practically entire flow diverted below station during irrigation season. Flow regulated by Lost Valley Reservoir (see p.184).

Cooperation.- Gage-height record furnished by Lost Valley Reservoir Co.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 8 to Sept. 30)

0.6	0.1	1.5	20	2.5	160
.8	.5	1.7	36	2.8	247
1.0	2.0	1.9	58		
1.3	3.0	2.2	99		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	2	a5	a18	6	5	a5	138	51	32	51	47
2	5	2	a5		6	5	a5	155	49	31	49	47
3	5	2	a5		6	5	a5	168	49	30	49	47
4	5	a2	5		6	5	a5	176	49	28	48	47
5	5	2	5		6	5	a5	184	51	26	48	47
6	5	2	9	20	6	5	h13	182	52	23	48	46
7	4	3	4		6	5	a30	168	58	22	48	46
8	5	a3	0		6	5	a45	158	66	20	49	46
9	5	3	0		6	5	a70	143	71	18	49	46
10	5	4	5		6	5	a110	134	76	16	51	46
11	a4	5	19	a6	6	5	a110	100	73	15	51	45
12	a4	6	18		6	5	h113	32	70	14	51	45
13	3	6			6	5	a115	46	66	13	51	45
14	3	6			6	5	a115	61	61	11	52	45
15	3	6			6	5	a110	71	56	10	52	45
16	3	6		a20	6	5	a110	76	52	10	52	45
17	3	6			6	5	a105	78	48	9	52	44
18	2	6			6	5	a105	80	49	42	51	44
19	2	5			6	5	a100	77	56	55	51	44
20	2	5			6	5	h99	73	56	54	51	44
21	2	5	a18	a5	a5	a5	a96	54	53	53	51	44
22	2	5					94	48	51	53	51	44
23	2	5					98	46	47	53	51	44
24	2						101	46	44	53	51	43
25	2						108	49	41	53	51	44
26	2	a5		h13	6	5	116	47	38	53	51	43
27	2				6	5	114	51	37	52	51	42
28	2				6	5	113	52	36	52	a50	43
29	2				6	5	116	48	35	52	a49	46
30	2				6	5	126	49	34	51	a48	46
31	2				6	5	-	48	-	49	47	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet				
October.....				100	5	2	3.2	198				
November.....				132	-	2	4.4	262				
December.....				422	-	0	13.6	837				
Calendar year 1940.....				14,689	322	0	40.1	29,120				
January.....				567	-	6	18.3	1,120				
February.....				167	-	-	6.0	331				
March.....				155	-	-	5.0	307				
April.....				2,457	126	5	81.9	4,870				
May.....				2,834	184	32	91.4	5,680				
June.....				1,875	76	34	52.5	3,120				
July.....				1,053	55	9	34.0	2,080				
August.....				1,555	52	47	60.2	3,080				
September.....				1,349	47	42	45.0	2,680				
Water year 1940-41.....				12,365	184	0	33.9	24,520				

a No gage-height record; discharge computed on basis of records for Lost Valley Reservoir.

h Computed from staff-gage readings.

## Hornet Creek near Council, Idaho

Location.- Staff gage, lat. 44°45', long. 116°29', in sec. 5, T. 16 N., R. 1 W., 2½ miles upstream from mouth and 2.5 miles northwest of Council. Prior to Oct. 20, 1940, at datum 2.00 feet higher.

Drainage area.- 107 square miles.

Records available.- April 1937 to September 1941 (fragmentary prior to August 1939).

Extremes.- Maximum discharge observed during year, 527 second-feet Mar. 1 (gage height, 5.88 feet); minimum observed, 0.4 second-foot July 18; minimum gage height observed, 2.00 feet Oct. 17, 19, present datum.  
1937-41: Maximum discharge observed, 1,180 second-feet Feb. 28, 1940 (gage height, 6.90 feet, present datum); no flow Aug. 19, 20, 1939, and probably at times during periods of no record.

Remarks.- Records fair. Gage read once daily. Slight regulation by two small reservoirs on South Fork of Hornet Creek. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	46	29	50	63	527	235	140	100	50	0.9	16
2	29	178	29	42	71	471	245	133	94	46	.7	16
3	34	100	30	44	68	417	268	171	94	52	1.1	23
4	26	75	29	57	50	326	225	148	SS	42	4.6	21
5	20	60	32	50	42	278	313	140	SS	39	2.5	19
6	17	64	30	47	50	301	245	126	SS	34	3.2	17
7	15	64	28	47	63	278	216	113	126	27	2.6	16
8	14	114	28	43	61	289	197	113	171	27	1.8	16
9	12	95	28	33	61	278	180	113	140	20	3.7	15
10	11	79	21	33	61	245	188	113	120	17	2.2	16
11	11	71	b20	39	79	235	206	126	113	15	2.2	14
12	11	57	b17	36	91	216	188	155	100	8.2	6.0	15
13	11	43	b15	39	91	188	171	171	100	4.6	4.1	15
14	11	44	14	39	83	163	163	155	94	3.2	4.6	14
15	11	42	16	36	75	155	155	133	82	1.8	5.5	14
16	11	40	18	39	60	163	140	120	75	1.1	5.6	13
17	11	40	28	36	75	180	126	113	71	.9	5.0	12
18	11	42	40	39	71	245	120	113	75	.4	4.1	11
19	11	36	83	49	71	235	106	94	106	1.1	7.7	23
20	11	32	87	46	75	216	100	88	88	.9	8.9	16
21	11	34	46	49	79	206	94	88	75	.5	8.9	15
22	11	29	49	49	87	197	94	87	59	.5	12	14
23	12	16	49	49	95	180	100	94	59	.5	10	13
24	12	32	104	61	209	163	113	100	55	.5	10	13
25	64	29	120	125	178	163	113	113	57	.5	12	12
26	35	23	91	209	131	171	113	100	52	.5	16	12
27	30	27	499	125	125	180	133	126	45	.7	18	12
28	27	25	150	100	193	197	126	106	59	1.3	14	9.5
29	27	29	104	79	-	206	133	88	67	4.1	13	9.5
30	32	33	87	75	-	266	140	82	57	1.5	14	9.5
31	50	-	75	71	-	245	-	100	-	1.1	16	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						611	64	-	19.7	1,210		
November.....						1,604	178	18	53.5	3,180		
December.....						1,987	499	14	64.1	3,940		
Calendar year 1940.....						31,279.6	1,020	.1	85.5	62,040		
January.....						1,836	209	33	59.2	3,640		
February.....						2,453	209	42	87.6	4,870		
March.....						7,580	527	155	245	15,030		
April.....						4,944	313	94	165	9,810		
May.....						3,659	171	82	113	7,280		
June.....						2,603	171	46	68.8	5,160		
July.....						402.9	52	.4	13.0	799		
August.....						220.7	18	.7	7.12	438		
September.....						440.5	23	9.5	14.7	874		
Water year 1940-41.....						28,351.1	527	.4	77.7	56,230		

b Stage-discharge relation affected by ice.

c Stage-discharge relation unstable because of channel work; discharge computed on basis of gage heights and records for other stations in Weiser River Basin.



## Middle Fork of Weiser River near Mesa, Idaho

Location.- Staff gage, lat. 44°39', long. 116°27', in NW¼ sec. 10, T. 15 N., R. 1 W., at old highway bridge, 1½ miles north of Mesa and 2½ miles upstream from mouth.

Drainage area.- 86.5 square miles.

Records available.- August 1919 to November 1921, April 1937 to September 1941. October 1910 to August 1913 at site three-quarters of a mile upstream.

Extremes.- Maximum discharge observed during year, 668 second-feet May 13 (gage height, 3.49 feet); no flow Aug. 3-10.

1919-21, 1937-41: Maximum discharge observed, 1,380 second-feet May 1, 1938, from rating curve extended above 1,000 second-feet; maximum gage height observed, 4.88 feet (present datum) Dec. 11, 1937; no flow at times in 1937, 1939, 1940, and 1941.

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read twice daily. Mesa Orchards canal diverts about 6½ miles above station.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Apr. 19 to July 17)

0.7	0	1.7	38	2.9	364
.9	.6	2.0	87	3.2	492
1.1	2.7	2.3	162	3.6	695
1.4	13	2.6	255		

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	120	45	b50	62	135	210	426	301	108	14	8
2	35	169	48	b45	62	185	248	376	283	98	3	9
3	68	120	49	b45	58	171	252	492	280	103	0	13
4	57	72	49	b50	52	135	219	516	242	98	0	15
5	44	62	49	b50	46	128	276	470	222	89	0	18
6	26	65	49	b45	41	122	232	426	206	74	0	17
7	25	85	46	b40	45	118	194	426	312	85	0	17
8	24	94	45	b37	44	110	185	398	315	457	0	15
9	22	87	44		46	108	197	368	255	452	0	15
10	22	83	41		52	105	225	404	232	444	0	11
11	21	72	b55		108	101	210	447	242	441	8	11
12	21	58	b32		108	96	210	640	245	445	13	8
13	19	55	b29	b35	85	87	210	640	232	42	7	6
14	19	52	b28		76	81	210	540	225	36	8	5
15	19	52	b30		68	78	203	426	174	30	6	5
16	19	55	b31		58	79	188	404	151	25	3	5
17	19	62	b35		57	83	179	404	146	23	2	7
18	19	58	b50	b37	55	81	168	447	176	21	4	9
19	18	44	b55	42	55	92	162	315	252	21	7	15
20	18	38	b55	45	57	94	162	290	286	20	11	18
21	18	45	49	48	70	87	168	326	252	17	13	18
22	17	42	48	49	106	96	158	380	215	15	12	18
23	17	38	49	49	80	94	197	404	197	14	11	17
24	21	37	68	60	197	87	213	404	185	13	10	17
25	101	39	87	94	125	98	245	400	162	12	10	18
26	52	39	101	120	105	110	266	426	140	10	9	17
27	41	36	185	83	96	130	312	319	135	22	12	18
28	36	39	96	68	105	155	326	294	146	41	8	18
29	48	49	76	65	-	171	341	297	135	35	8	18
30	68	46	b68	65	-	213	372	308	118	23	7	18
31	85	-	b60	62	-	203	-	322	-	17	8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,066	101	17	34.4	2,110
November.....	1,912	168	36	63.7	3,790
December.....	1,732	185	28	55.9	3,440
Calendar year 1940.....	46,386	1,000	0	127	91,910
January.....	1,562	120	-	50.4	3,100
February.....	2,125	197	41	75.9	4,210
March.....	3,613	215	76	117	7,170
April.....	6,739	372	159	225	13,370
May.....	12,703	640	290	410	25,200
June.....	6,463	315	118	215	12,820
July.....	1,311	108	10	42.3	2,600
August.....	194	14	0	6.3	385
September.....	404	18	5	13.5	801
Water year 1940-41.....	39,824	640	0	109	79,000

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of assumption that gage heights were reported 1 foot too high.

## Mesa Orchards canal near Mesa, Idaho

Location.- Staff gage, lat. 44°38', long. 116°25', in sec. 14, T. 15 N., R. 1 W., 1,500 feet upstream from end of flume, 1½ miles northeast of Mesa, and 3 miles downstream from head gates.

Records available.- 1924, 1928, 1930-41 (irrigation seasons only).

Extremes.- Maximum daily discharge observed during year, 34 second-feet July 15-17, 23, Aug. 5-7; maximum gage height observed, 2.02 feet July 14, 15, Aug. 6; no flow at times.

1924, 1928, 1930-41: Maximum discharge observed, 38 second-feet June 18, 19, 1940 (gage height, 2.32 feet); no flow during nonirrigation seasons.

Remarks.- Records fair. Canal diverts water from Middle Fork of Weiser River in SE¼ NW¼ Sec. 9, T. 15 N., R. 1 E., for irrigation of Mesa orchards and for domestic supply of Mesa. Flow regulated by gates in diversion dam and by waste gates in flume above gage. Gage read twice daily.

Cooperation.- Gage-height record furnished by operators of Mesa orchards.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	9	16	33	21
2								-	15	16	33	18
3								-	23	15	33	16
4								-	25	14	33	11
5								-	24	16	34	11
6								-	24	21	34	12
7								-	16	25	34	11
8								e9	7	28	33	11
9							†4	e10	6	29	33	14
10	†4							e11	6	30	33	16
11								e12	6	32	32	18
12								e14	6	32	31	19
13								e15	8	32	28	23
14								e14	9	33	26	22
15								e17	9	34	27	23
16								e19	13	34	29	20
17								e15	15	34	29	19
18								e15	19	33	29	15
19								18	6	32	27	9
20								19	6	32	23	a7
21								19	7	32	21	a7
22								21	6	33	23	a7
23								24	7	34	21	a7
24								26	7	33	20	7
25								25	9	33	19	-
26								25	11	32	23	-
27								26	12	32	23	-
28								26	15	31	23	-
29								25	16	31	22	-
30								18	16	33	24	-
31								11	-	33	24	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....												
November.....												
December.....												
Calendar year .....												
January.....								-	-	-	-	-
February.....								-	-	-	-	-
March.....								-	-	-	-	-
April.....								-	-	-	-	-
May 8-31.....								437	26	9	18.2	867
June.....								361	25	6	12.0	716
July.....								895	34	14	28.9	1,780
August.....								857	34	19	27.6	1,700
September 1-24.....								344	23	7	14.3	682
The period.....								-	-	-	-	5,740

† Result of discharge measurement.

a No gage-height record; discharge interpolated.

e Computed on basis of estimated fall through slope reach.

## Johnson Creek below Johnson Park near Council, Idaho

Location.- Water-stage recorder, lat. 44°46', long. 116°38', in SE¼ sec. 36, T. 17 N., R. 3 W., 30 feet downstream from Johnson Park Creek, three-quarters of a mile south-east of Johnson Park, and 10 miles northwest of Council.

Drainage area.- 5 square miles.

Records available.- March to September 1941.

Extremes.- Maximum discharge during period, 98 second-feet May 12 (gage height, 1.97 feet) from rating curve extended above 60 second-feet; minimum, 0.5 second-foot Sept. 18 (gage height, 0.24 foot).

Remarks.- Records fair. No diversion or regulation.

Rating tables, Mar. 7 to Sept. 30 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Sept. 19-30)

Mar. 7 to May 12				May 13 to Sept. 30			
0.4	2.8	1.3	34	0.2	0.3	1.0	15.5
.6	5.8	1.6	59	.4	1.8	1.3	33.5
.8	10.5	1.9	90	.6	4.4	1.6	59
1.0	17.5			.8	8.5	1.9	90

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						-	18	a65	41	11	2.4	1.0
2						-	19	a65	37	10	2.2	3.7
3						-	17	a76	35	10	2.0	2.3
4						-	15	a70	32	9.1	1.8	1.6
5						-	14	a60	30	8.3	1.7	1.2
6						-	13	a55	32	7.6	1.6	1.0
7						- 3.2	12	a50	55	6.9	1.5	.9
8						3.3	13	a50	43	6.4	1.4	.8
9						3.4	14	a55	34	6.0	1.4	.8
10						3.6	14	60	29	5.8	1.3	.7
11						3.7	13	70	27	5.7	1.6	.7
12						4.0	12	79	26	5.3	2.2	.8
13						4.0	13	83	25	4.9	1.6	.8
14						4.0	16	72	24	4.8	1.3	.8
15						4.1	17	66	22	4.4	1.1	.8
16						4.6	15	62	20	4.3	1.0	.7
17						5.0	14	61	20	4.0	1.0	.6
18						5.3	13	54	29	4.0	1.7	1.4
19						5.3	14	47	30	3.8	1.8	4.3
20						5.5	16	47	20	3.7	2.2	1.9
21						5.6	18	50	18	3.4	1.7	1.4
22						6.0	19	56	16	3.1	1.4	1.2
23						6.0	a20	53	14	2.9	1.2	1.0
24						6.0	a25	58	14	2.8	1.1	.9
25						6.0	a30	57	13	3.0	1.3	.9
26						6.8	a35	58	12	2.9	2.2	.8
27						8.2	a45	60	14	3.4	1.7	.8
28						9.5	a50	49	18	4.9	1.4	.9
29						10	a55	44	17	4.4	1.2	1.0
30						13	a60	45	13	3.3	1.5	1.0
31						16	-	47	-	2.8	1.2	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....												
November.....												
December.....												
Calendar year .....												
January.....						-	-	-	-	-		
February.....						-	-	-	-	-		
March 7-31.....						152.1	16	3.2	6.08	302		
April.....						649	60	12	21.6	1,290		
May.....						1,823	53	44	58.8	3,620		
June.....						760	55	12	25.3	1,510		
July.....						162.9	11	2.8	5.25	323		
August.....						48.7	2.4	1.0	1.57	97		
September.....						36.7	4.3	.6	1.22	73		
The period.....						-	-	-	-	7,220		

a Incomplete or no gage-height record; discharge computed on basis of recorded range in stage, weather records, and records for nearby stations.

## Rush Creek at Cambridge, Idaho

Location.- Staff gage, lat. 44°35', long. 116°40', in SW¼ sec. 2, T. 14 N., R. 3 W., in Cambridge, 150 feet upstream from Superior Street and three-eighths of a mile upstream from mouth.

Records available.- March 1938 to September 1941.

Extremes.- Maximum discharge observed during year, 291 second-feet May 13 (gage height, 4.64 feet); minimum observed, 0.2 second-foot July 18, 19, 22.  
1938-41: Maximum discharge observed, 582 second-foot (discharge measurement) Mar. 16, 1938 (gage height, 6.07 feet); no flow at times during each year 1938-40.

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read twice daily. Several diversions above station for irrigation. Flow regulated slightly by power plant 8 miles above station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	17	12	29	21	92	40	168	142	39	6.7	5.3
2	16	24	13	34	21	97	48	168	137	36	4.5	5.3
3	29	22	14	23	20	77	47	192	147	36	4.2	9.6
4	14	18	13	24	19	64	46	169	137	32	4.2	7.3
5	11	16	14	23	18	56	60	142	132	28	5.0	6.4
6	9.9	20	13	21	20	52	47	132	127	23	6.4	5.9
7	9.9	31	13	17	21	49	43	122	192	19	5.6	5.9
8	5.9	28	13	13	20	45	41	127	168	14	4.8	5.9
9	5.3	25	13	12	29	46	41	127	132	11	2.8	5.9
10	7.3	21	11	b12	32	43	43	158	132	5.9	1.4	4.8
11	7.3	18	9.6	b12	117	37	45	192	137	8.3	1.3	3.7
12	6.7	16	8.3	b12	107	35	39	260	137	8.4	2.8	4.2
13	6.7	16	7.6	b12	52	31	38	291	132	5.9	2.6	4.5
14	6.2	16	b7.5	b13	46	29	38	231	122	3.5	2.1	5.0
15	6.2	16	b10	b13	44	27	42	204	112	1.4	1.7	5.0
16	5.6	14	b15	b13	35	26	37	180	97	.4	1.4	4.2
17	5.6	14	b25	b13	33	29	36	169	92	.4	1.2	4.0
18	5.0	13	b40	b13	32	29	35	158	112	.2	1.5	3.7
19	5.0	12	44	b13	35	29	33	132	127	.2	3.7	5.6
20	4.8	12	41	13	36	29	34	122	92	.4	2.5	5.3
21	4.5	13	33	14	37	26	35	147	87	.3	2.4	5.3
22	4.8	13	31	14	56	27	40	180	72	.2	1.8	5.3
23	5.0	b11	43	16	72	23	43	204	60	.7	1.8	4.8
24	7.0	12	50	31	102	22	50	217	60	.6	1.7	4.5
25	24	12	52	127	68	21	64	245	52	.6	2.4	4.2
26	15	12	87	77	56	21	77	204	47	.7	3.7	4.0
27	15	12	169	60	49	24	102	204	48	1.8	4.0	3.7
28	13	12	72	43	87	29	107	158	51	5.3	3.3	3.3
29	18	13	46	36	-	31	122	142	50	20	3.0	3.3
30	18	12	38	32	-	39	137	137	44	9.9	5.3	3.0
31	20	-	30	26	-	35	-	147	-	8.0	6.4	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						327.3	29	4.5	10.6	649		
November.....						490	31	11	16.3	972		
December.....						988.0	169	7.5	31.9	1,960		
Calendar year 1940.....						15,653.2	319	0	42.5	31,040		
January.....						811	127	12	26.2	1,610		
February.....						1,255	117	18	45.9	2,550		
March.....						1,223	97	21	39.5	2,430		
April.....						1,610	137	33	53.7	3,190		
May.....						5,409	291	122	174	10,730		
June.....						3,167	192	44	106	6,280		
July.....						322.1	39	.2	10.4	639		
August.....						102.5	6.7	1.2	3.31	203		
September.....						151.9	9.6	3.0	5.06	301		
Water year 1940-41.....						15,886.5	291	.2	43.5	31,510		

b Stage-discharge relation affected by ice.

## Pine Creek near Cambridge, Idaho

Location.- Staff gage, lat. 44°35', long. 116°44', in SW¼ sec. 32, T. 15 N., R. 3 W., 300 feet upstream from mouth of West Fork and 3.2 miles northwest of Cambridge.

Records available.- April 1938 to September 1941.

Extremes.- Maximum discharge observed during year, 246 second-feet Mar. 2 (gage height, 2.38 feet); minimum observed, 4 second-feet July 16-19, 22-24, Aug. 7-11; minimum gage height observed, 0.52 foot July 16, 18.  
1938-41: Maximum discharge observed, 392 second-feet Apr. 1, 1940 (gage height, 3.26 feet), from rating curve extended above 250 second-feet; minimum observed, 2 second-feet on several days July to October 1939 and July and August 1940; minimum gage height observed, 0.34 foot July 24, 1939.

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read twice daily. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	25	18	40	30	216	97	138	81	34	10	11
2	11	27	18	31	30	d236	98	131	90	33	9	12
3	16	26	18	27	28	207	107	134	86	30	7	13
4	17	25	18	31	27	161	114	127	78	28	6	14
5	18	22	18	30	27	148	119	110	81	27	6	15
6	18	29	d18	28	26	148	114	100	78	26	6	14
7	18	52	18	25	27	150	95	90	122	24	4	14
8	17	64	18	24	28	148	97	87	124	23	4	14
9	15	34	19	24	31	148	97	94	102	17	4	12
10	15	30	18	b22	33	147	97	114	102	13	4	9
11	15	28	b16	b21	46	139	90	124	102	12	4	10
12	15	27	b14	b20	68	120	87	150	97	11	6	11
13	14	24	b11	b19	56	103	81	170	94	10	7	13
14	13	23	b10	b19	45	94	76	159	94	9	6	12
15	13	23	b10	b20	43	81	73	159	90	7	6	11
16	13	21	b11	b20	34	80	73	112	76	5	9	13
17	12	25	b13	20	35	84	73	108	70	4	9	13
18	12	21	b17	18	34	98	65	97	78	4	10	13
19	13	22	b22	19	34	94	61	81	73	5	10	14
20	13	21	b24	19	36	90	60	78	64	11	10	14
21	12	21	23	19	38	90	60	97	55	9	8	14
22	12	21	21	19	39	83	60	110	55	5	7	14
23	13	21	28	20	42	81	60	119	55	5	9	14
24	14	21	43	25	62	78	62	131	46	5	10	13
25	15	21	64	37	70	73	73	127	42	5	10	14
26	19	20	152	50	66	70	81	122	38	6	10	12
27	20	19	100	41	69	73	89	136	35	6	10	12
28	22	19	70	40	97	73	97	119	45	28	10	11
29	22	18	62	38	-	81	108	78	42	22	11	11
30	22	18	54	35	-	86	122	76	38	14	11	12
31	22	-	46	32	-	94	-	84	-	11	11	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						481	22	10	15.5	954		
November.....						766	64	18	25.5	1,520		
December.....						992	152	10	32.0	1,970		
Calendar year 1940.....						15,995	348	2	43.7	31,730		
January.....						533	50	18	26.9	1,650		
February.....						1,191	97	26	42.5	2,360		
March.....						3,574	236	70	115	7,090		
April.....						2,586	122	60	86.2	5,130		
May.....						3,557	170	76	115	7,060		
June.....						2,235	124	35	74.5	4,430		
July.....						449	34	4	14.5	891		
August.....						244	11	4	7.9	454		
September.....						379	15	9	12.6	752		
Water year 1940-41.....						17,287	236	4	47.4	34,290		

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of assumption of error in one gage reading.

## Little Weiser River near Indian Valley, Idaho

Location.- Staff gage, lat. 44°30', long. 116°24', in NE¼ sec. 1, T. 13 N., R. 1 W., 80 feet downstream from barn at Richardson Ranch, about 1 mile upstream from diversion feeding C. Ben Ross Reservoir, and 4½ miles southeast of Indian Valley.

Drainage area.- 81.9 square miles.

Records available.- April 1938 to September 1941. June 1920 to February 1921, March to September 1923, and February 1924 to October 1927 at nearby sites.

Extremes.- Maximum discharge observed during year, 482 second-feet May 12, 13 (gage height, 3.40 feet); minimum observed, 13 second-feet Oct. 18-24, Sept. 11, 12, 21-30; minimum gage height observed, 0.48 foot Sept. 26-28, 30.

1920-21, 1923-27, 1938-41: Maximum discharge observed, about 1,840 second-feet Feb. 4, 1925; minimum observed, 3.6 second-feet Aug. 28-30, Sept. 4, 5, 1924.

Remarks.- Records good. Gage read twice daily. One small ranch diversion above station. Many diversions below station for irrigation including feeder canal to C. Ben Ross reservoir.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	53	53	39	36	305	190	280	233	81	26	14
2	18	135	53	32	36	256	190	256	222	76	24	15
3	18	135	51	32	33	190	211	332	233	76	22	17
4	26	70	48	37	30	144	211	360	222	65	21	16
5	24	60	48	37	29	136	244	318	200	65	21	16
6	22	61	47	37	32	120	200	280	200	60	20	15
7	20	66	43	34	35	106	180	256	268	55	19	15
8	18	70	40	30	32	113	170	305	233	53	18	14
9	16	61	40	28	34	106	170	280	233	48	18	14
10	16	51	27	27	39	100	190	280	222	48	17	14
11	15	48	24	29	93	93	200	332	190	45	15	13
12	14	32	24	27	93	87	190	450	170	44	29	14
13	14	31	19	29	63	76	190	432	161	42	20	14
14	14	34	18	31	56	69	190	450	152	41	17	14
15	14	33	23	30	53	67	180	360	135	40	16	19
16	14	32	23	30	46	71	161	346	128	37	17	16
17	14	35	26	29	46	76	144	332	120	34	15	16
18	13	34	34	32	44	100	135	280	152	32	20	15
19	13	28	35	40	43	93	128	256	211	32	21	14
20	13	28	32	42	46	93	128	244	170	30	20	14
21	13	30	30	40	51	87	128	268	128	30	18	14
22	13	21	30	40	69	93	144	280	113	28	16	13
23	13	18	42	39	68	87	161	305	113	28	16	14
24	15	28	43	47	144	81	180	346	106	26	16	13
25	54	26	46	93	106	93	190	332	106	26	16	13
26	29	22	45	71	81	100	200	318	93	27	19	13
27	28	22	128	56	76	120	222	292	100	39	19	13
28	23	28	65	50	170	113	233	256	100	39	16	13
29	30	100	55	43	-	161	244	244	100	32	15	13
30	42	60	51	39	-	180	268	280	87	28	15	13
31	45	-	47	38	-	170	-	256	-	26	15	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	638	54	13	20.6	0.252	0.29	1,270
November.....	1,452	135	18	48.4	.591	.66	2,880
December.....	1,288	128	18	41.5	.507	.58	2,550
Calendar year 1940.....	41,496	626	6	113	1.38	18.84	82,310
January.....	1,206	93	27	39.0	.476	.55	2,400
February.....	1,684	170	29	60.1	.734	.76	3,340
March.....	3,685	305	67	119	1.45	1.67	7,310
April.....	5,572	268	128	186	2.27	2.53	11,050
May.....	9,656	482	244	311	3.80	4.38	19,150
June.....	4,901	268	87	163	1.99	2.22	9,720
July.....	1,351	81	26	42.9	.524	.60	2,640
August.....	650	29	15	18.7	.228	.26	1,150
September.....	431	19	13	14.4	.176	.20	855
Water year 1940-41.....	32,426	482	13	88.8	1.08	14.70	64,320

## Crane Creek Reservoir near Midvale, Idaho

Location.- Staff gage, lat. 44°22', long. 116°37', in SE¼ sec. 19, T. 12 N., R. 2 W., at gate-control structure near left end of dam on Crane Creek, 10 miles southeast of Midvale.

Drainage area.- 242 square miles.

Records available.- November 1923 to September 1941.

Extremes.- Maximum gage height observed during year, 49.2 feet Feb. 13, 25; minimum not determined.

1924-41: Maximum gage height observed, 56.3 feet Feb. 22, 1927; no usable contents Sept. 23, 1928, to Feb. 25, 1929, and Sept. 25 to Dec. 1, 1929.

Remarks.- Reservoir is formed by earth dam completed in 1910 and raised during 1920-21. Capacity is reported to be about 60,000 acre-feet at gage height, 55.0 feet (elevation of spillway crest). Water is used for irrigation of lands in the lower Weiser Valley. Gage read once daily.

Cooperation.- Gage-height record furnished by Crane Creek Reservoir Administration Board.

Gage height, in feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	46.60	48.60	48.20	47.95	47.80	48.10	45.30	42.30
2	-	35.20	-	-	-	48.50	48.20	-	47.80	48.05	45.20	42.30
3	-	-	-	-	46.70	48.45	49.10	48.00	47.75	48.00	45.15	42.25
4	-	-	-	41.10	-	48.10	48.00	48.00	47.75	48.00	45.10	42.25
5	32.65	-	-	-	46.90	47.70	48.10	48.00	47.70	47.95	45.00	42.20
6	-	-	-	-	-	47.40	-	48.00	-	47.95	44.90	42.20
7	-	-	37.10	-	-	47.40	48.00	48.00	-	-	-	-
8	-	-	-	-	47.10	47.50	48.00	-	48.10	47.90	44.80	42.15
9	32.68	35.00	-	-	-	-	48.00	48.00	48.10	47.90	44.60	-
10	-	-	-	-	-	-	-	48.00	48.10	47.85	44.55	42.10
11	-	-	-	41.30	46.10	-	48.40	48.00	48.10	-	44.40	42.10
12	32.70	-	-	-	49.00	-	-	47.95	-	47.80	44.20	42.10
13	-	-	-	-	49.20	-	-	47.95	48.05	47.70	-	42.00
14	-	-	38.00	-	49.00	-	48.20	-	-	47.65	44.00	42.00
15	-	-	-	-	48.70	47.90	48.15	47.95	48.00	47.60	43.80	42.00
16	-	35.50	-	-	48.20	-	48.00	47.95	48.00	-	43.50	41.95
17	-	-	-	-	47.80	-	48.00	47.92	-	47.20	-	41.95
18	-	-	-	41.55	47.50	-	-	-	48.00	47.00	43.25	41.95
19	32.75	-	-	-	47.20	-	48.00	-	48.10	-	43.10	41.90
20	-	-	-	-	47.00	-	-	47.90	48.12	45.70	-	41.90
21	-	-	38.80	-	47.10	-	47.95	47.90	48.10	46.60	42.90	-
22	-	-	-	-	47.50	48.20	47.95	47.85	48.10	46.50	42.80	-
23	-	36.10	-	-	48.00	-	47.95	47.85	48.10	-	-	-
24	-	-	-	-	48.50	-	48.00	47.80	48.05	46.20	42.70	-
25	-	-	-	43.80	49.20	-	47.95	-	48.00	-	42.60	-
26	32.80	-	-	44.80	49.00	-	47.95	47.80	48.00	-	42.60	41.80
27	-	-	-	45.60	48.80	-	47.95	47.80	-	45.80	42.55	41.75
28	-	-	40.40	-	48.70	48.30	-	47.80	48.00	45.70	42.50	41.75
29	-	-	-	-	-	48.30	-	-	48.10	-	42.40	41.70
30	-	36.30	-	46.20	-	48.25	-	47.80	48.10	45.50	42.35	41.70
31	-	-	-	-	-	48.25	-	47.80	-	45.40	42.30	-

## Crane Creek near Midvale, Idaho

Location.- Water-stage recorder and concrete control, lat. 44°22', long. 116°37'30", in SE¼ sec. 19, T. 12 N., R. 2 W., 400 feet downstream from Crane Creek Dam and 10 miles southeast of Midvale.

Drainage area.- 242 square miles.

Records available.- October 1910 to April 1916, May 1924 to September 1941.

Average discharge.- 20 years (1912-15, 1924-41), 65.9 second-feet.

Extremes.- Maximum discharge during year, 736 second-feet Mar. 1 (gage height, 3.27 feet); practically no flow at times when gates in dam were closed.  
1910-16, 1924-41: Maximum discharge observed, 4,240 second-feet Dec. 3, 1910 (gage height, 8.9 feet), from rating curve extended above 3,500 second-feet; practically no flow at times in each year when gates in dam were closed.

Remarks.- Records good. Flow regulated by Crane Creek Reservoir (see p. 193). No large diversions above station.

Cooperation.- Gage-height record furnished by Crane Creek Reservoir Administration Board.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

0.1	0.5	1.3	101	2.8	484
.3	7	1.6	141	3.1	635
.5	20	1.9	192	3.3	765
.7	36	2.2	264		
1.0	66	2.5	361		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	730	52	0	8	65	64	12
2					0	730	106	0	8	46	64	15
3					0	730	159	2	8	17	64	12
4					0	730	106	7	8	h5	64	12
5					0	681	135	7	8	h5	64	12
6					0	532	192	7	9	h5	64	11
7					0	134	194	8	9	4	64	11
8					0	f1	131	8	20	h5	104	10
9					0	0	65	8	48	h5	118	10
10					0	0	50	8	48	f12	127	9
11					f253	0	117	8	48	f33	141	8
12					f586	0	213	8	46	f55	159	8
13					664	0	213	8	46	h79	159	7
14					699	0	225	8	46	h79	156	7
15					693	0	223	8	23	f135	150	6
16					693	0	116	8	5	f181	150	6
17					658	0	50	8	5	f168	147	6
18					603	0	50	8	5	150	155	6
19					603	0	48	8	31	150	105	6
20					436	0	48	8	54	148	90	6
21					108	0	35	8	54	148	90	6
22					0	0	17	7	54	141	79	6
23					99	0	12	7	54	128	54	6
24					350	0	12	7	54	127	54	6
25					546	0	12	7	46	127	54	6
26					613	0	12	7	28	127	54	7
27					613	0	6	7	3	126	54	7
28					f654	32	0	7	3	120	54	7
29					-	54	0	7	29	106	54	8
30					-	52	0	7	65	105	54	8
31					-	52	-	8	-	95	25	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					0	0	0	0	0			
November.....					0	0	0	0	0			
December.....					0	0	0	0	0			
Calendar year 1940.....					45,859	898	0	120	87,000			
January.....					0	0	0	0	0			
February.....					8,371	699	0	317	17,600			
March.....					4,458	730	0	144	8,840			
April.....					2,599	225	0	86.6	5,160			
May.....					214	8	0	6.9	424			
June.....					873	65	3	29.1	1,730			
July.....					2,695	181	4	86.9	5,360			
August.....					2,615	159	25	90.8	5,560			
September.....					247	15	6	8.2	490			
Water year 1940-41.....					22,772	730	0	62.4	45,170			

f Fragmentary gage-height record; discharge computed from partly estimated gage-heights.

h Computed from staff-gage readings.



## Crane Creek at mouth, near Weiser, Idaho

Location.— Water-stage recorder and concrete control, lat. 44°18', long. 116°47', in sec. 14, T. 11 N., R. 4 W., just downstream from steel highway bridge at Harris Ranch, a quarter of a mile upstream from mouth, and 10 miles northeast of Weiser.

Drainage area.— 288 square miles.

Records available.— July 1920 to September 1941.

Average discharge.— 20 years (1921-41), 71.5 second-feet.

Extremes.— Maximum discharge during year, 1,070 second-feet Mar. 2 (gage height, 5.57 feet); minimum, 2 second-feet May 3, 4 (gage height, 1.74 feet).

1920-41: Maximum discharge, 2,350 second-feet about Feb. 7, 1925 (gage height, 6.80 feet, from well-defined marks on gage), from rating curve extended above 1,000 second-feet; minimum, 0.2 second-foot May 26, 1931; minimum gage height, 1.30 feet Jan. 21, 1922.

Remarks.— Records good except those for Oct. 31 to Mar. 11 which are fair. Flow regulated by Crane Creek Reservoir (see p. 193). Several small ditches divert above station for irrigation.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

1.6	0.6	2.6	52	3.8	223	5.0	705
1.8	4	2.9	81	4.1	304	5.3	890
2.0	11	3.2	117	4.4	410	5.6	1,110
2.3	28	3.5	163	4.7	545		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7	a40	f25	11	a15	995	55	4	12	60	62	13
2	8	a50	f28	a9	13	995	74	4	11	52	60	18
3	17	f45	f33	a8	13	925	179	3	11	34	60	17
4	9	f16	f28	a7	13	890	110	3	11	15	a58	15
5	6	f8	20	7	13	868	123	4	11	11	87	15
6	5	f6	15	7	14	658	197	5	12	10	58	14
7	5	10	12	7	a25	223	197	5	18	8	57	13
8	5	20	10	6	a25	f27	159	6	22	7	78	13
9	4	f12	8	6	34	f17	80	5	44	7	104	12
10	4	f9	7	5	93	h17	60	5	48	6	112	12
11	4	7	5	5	606	a15	85	5	47	17	127	12
12	4	7	5	6	890	13	212	4	48	37	149	11
13	4	6	4	6	858	13	223	4	48	68	149	11
14	4	5	5	6	a880	12	233	5	48	70	149	11
15	4	f4	5	8	a865	11	240	4	43	99	140	11
16	4	f4	5	8	858	11	166	5	15	167	140	11
17	4	f4	5	a10	825	10	58	5	12	163	138	11
18	4	4	5	a11	765	10	53	5	12	137	137	11
19	4	4	6	12	756	10	52	5	16	137	109	11
20	4	4	11	15	666	9	50	5	52	136	89	12
21	4	4	15	17	269	8	46	5	55	137	88	11
22	4	4	14	a20	136	8	30	6	55	132	86	8
23	4	4	a25	a25	162	8	20	6	55	117	53	8
24	5	4	a40	a100	795	7	19	6	53	116	52	9
25	12	4	a40	h280	735	7	17	6	50	116	52	9
26	8	4	a70	245	795	7	18	6	39	116	52	10
27	6	5	a150	97	795	6	17	8	19	121	52	10
28	6	5	f35	58	890	10	9	8	12	116	50	10
29	11	24	20	a40	-	56	4	8	11	100	49	11
30	24	46	17	a30	-	56	4	11	59	98	50	11
31	f28	-	14	a20	-	55	-	12	-	94	44	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	222	28	4	7.2	440
November.....	369	50	4	12.3	732
December.....	682	150	4	22.0	1,350
Calendar year 1940.....	52,609	1,390	1	144	104,400
January.....	1,092	280	5	35.2	2,170
February.....	12,813	890	13	468	25,410
March.....	5,947	995	6	192	11,800
April.....	2,790	240	4	95.0	5,530
May.....	173	12	3	5.6	345
June.....	949	59	11	31.6	1,880
July.....	2,502	167	6	80.7	4,960
August.....	2,681	149	44	85.8	5,280
September.....	351	18	8	11.7	695
Water year 1940-41.....	30,551	995	3	83.7	60,590

a No gage-height record; discharge computed on basis of weather records, records for Weiser River stations and for Crane Creek near Midvale.

f Fragmentary gage-height record; discharge computed on basis of partly estimated gage-height record.

h Computed from staff-gage readings.

## Weiser Irrigation District canal near Weiser, Idaho

Location.- Water-stage recorder, lat. 44°15', long. 115°51', in sec. 32, T. 11 N., R. 4 W.,  $\frac{3}{4}$  miles downstream from headworks of canal and 7 miles east of Weiser.

Records available.- April 1920 to September 1941.

Extremes.- Maximum discharge during year, 202 second-feet July 10 (gage height, 3.05 feet); minimum recorded, 0.5 second-foot Mar. 30 (gage height, 0.08 foot). A lesser flow may have occurred during winter period of no record.  
1920-41: Maximum discharge, 221 second-feet July 15, 1932; maximum gage height, 3.43 feet May 5, 1926; no flow at times when gates were closed.

Remarks.- Records good. One farm lateral diverts a quarter of a mile above station. Canal diverts water from Weiser River in Sec. 35, T. 11 N., R. 4 W.,  $\frac{3}{4}$  miles above station for irrigation of about 7,000 acres included in projects of Weiser and Weiser Bench Irrigation Districts near Weiser.

Cooperation.- Gage-height record furnished by Weiser Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	a40	-	-	-	-	4.5	190	190	181	168	154
2	59	a42	18	-	-	-	4.5	190	190	182	167	152
3	a38	a42	18	-	-	-	4.5	190	189	180	165	147
4	a38	a41	18	-	-	-	4.5	191	188	183	165	138
5	a38	40	18	-	-	-	4.5	186	189	184	168	139
6	a37	40	17	-	-	8.4	a4.9	186	189	184	160	139
7	a37	40	17	-	-	8.4	5.3	186	93	182	146	138
8	37	40	16	-	-	8.4	47	186	a16	186	139	137
9	37	40	16	-	-	8.4	81	191	a16	190	161	138
10	37	40	-	-	-	9.1	93	190	a84	196	163	137
11	37	40	-	-	-	8.4	97	190	172	200	170	137
12	37	39	-	-	-	8.4	98	191	190	192	182	136
13	36	37	-	-	-	8.4	104	190	190	196	185	136
14	36	36	-	-	-	8.4	107	189	189	183	186	136
15	36	36	-	-	-	8.4	117	183	189	167	186	136
16	a36	34	-	-	-	8.4	124	182	186	196	186	135
17	a36	34	-	-	-	8.4	128	184	186	194	186	136
18	36	-	-	-	-	8.4	135	184	190	180	183	135
19	36	-	-	-	-	8.4	145	182	135	173	174	129
20	36	-	-	-	-	a8.2	149	183	67	163	172	124
21	36	-	-	-	-	a8.0	152	187	173	166	174	124
22	36	-	-	-	-	7.8	161	189	186	177	174	124
23	36	-	-	-	-	8.4	167	189	186	166	169	118
24	36	-	-	3.2	-	8.4	171	189	186	160	166	110
25	37	-	-	3.2	-	9.1	179	190	189	163	152	111
26	39	-	-	3.2	-	9.1	186	190	191	161	171	111
27	38	-	-	3.2	-	9.1	188	190	189	166	173	111
28	37	-	-	3.5	-	9.1	189	190	189	168	172	110
29	37	-	-	3.8	-	5.6	190	189	184	172	170	109
30	37	-	-	3.2	-	2.0	190	189	182	172	163	109
31	38	-	-	3.2	-	4.9	-	191	-	172	164	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						1,202	75	36	38.8		2,380	
November 1-17.....						660	42	34	38.8		1,310	
December 2-9.....						158	18	16	17.2		274	
Calendar year .....						-	-	-	-		-	
January 24-31.....						26.5	3.8	3.2	3.31		53	
February.....						-	-	-	-		-	
March 6-31.....						208.0	9.1	2.0	8.00		413	
April.....						3,228.7	190	4.5	108		6,400	
May.....						5,827	191	182	198		11,560	
June.....						4,893	191	16	163		9,710	
July.....						5,535	200	160	179		10,980	
August.....						5,260	186	139	170		10,430	
September.....						3,896	154	109	130		7,730	
Water year .....						-	-	-	-		-	

a No gage-height record; discharge computed on basis of data furnished by observer and records for Weiser River near Weiser.

## Mann Creek near Weiser, Idaho

Location.- Staff gage, lat. 44°24', long. 116°54', in sec. 11, T. 12 N., R. 5 W., at Richards Ranch, 12 miles upstream from mouth and 11 miles northeast of Weiser.

Drainage area.- 56 square miles.

Records available.- March 1911 to September 1913, July to November 1920, April 1937 to September 1941.

Extremes.- Maximum discharge observed during year, 316 second-feet Mar. 31 (gage height, 3.04 feet); minimum observed, 4.1 second-feet Oct. 18-21; minimum gage height observed, 1.04 feet Aug. 8-10.

1911-13, 1920, 1937-41: Maximum discharge, 1,540 second-feet Mar. 27, 1940 (gage height, 5.45 feet, from high-water mark), from rating curve extended above slope-area determination at gage height 4.21 feet; no flow Aug. 18 to Sept. 22, 1937, July 31 to Sept. 13, 1939.

Remarks.- Records fair. Gage read twice daily. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.9	12	9.5	22	20	127	d278	158	23	25	7.5	6.3
2	11	38	10	16	20	198	d266	153	21	23	6.6	7.9
3	12	18	10	16	19	135	266	149	21	21	6.6	9.1
4	9.5	14	11	16	18	103	242	145	20	18	6.6	7.9
5	6.9	13	11	16	21	96	278	142	18	17	6.0	6.9
6	6.0	14	9.5	16	25	94	209	106	21	16	6.0	6.0
7	5.7	25	11	14	27	106	188	98	45	16	6.0	6.0
8	5.1	22	11	13	26	115	198	90	57	16	5.1	6.0
9	4.8	21	11	12	26	128	188	78	42	16	4.8	6.0
10	4.5	15	9.9	12	30	113	188	76	39	16	5.1	6.0
11	4.5	14	b9.0	12	30	111	168	83	38	14	7.2	5.4
12	4.5	14	b8.0	b11	46	104	157	93	36	14	11	5.4
13	4.5	14	b8.0	12	40	85	160	90	34	12	7.5	5.4
14	4.5	11	b8.0	16	30	80	168	77	34	12	6.0	5.4
15	4.5	11	b10	13	28	80	164	66	32	12	5.4	5.6
16	4.5	10	b11	12	24	101	157	71	30	9.9	5.1	6.3
17	4.5	10	b13	13	26	127	136	66	32	9.9	5.1	5.7
18	4.3	10	b16	14	26	178	124	62	35	9.9	6.3	5.1
19	4.1	9.5	b20	14	26	155	111	51	47	9.9	7.5	7.2
20	4.1	8.7	21	16	27	145	111	50	36	9.9	7.5	6.0
21	4.1	10	12	14	27	136	111	36	34	9.5	6.3	5.7
22	4.5	b9.0	13	16	45	136	113	33	31	9.1	5.7	5.7
23	4.5	b8.5	61	16	55	111	111	34	28	8.7	6.3	5.7
24	5.4	b9.0	31	26	103	115	127	32	27	8.3	6.0	5.4
25	16	9.5	32	e90	65	136	145	29	27	8.3	6.3	5.7
26	9.9	9.5	28	62	62	149	157	29	27	9.1	7.9	5.7
27	9.5	9.5	118	33	60	158	153	35	30	11	6.3	5.7
28	7.5	11	37	28	82	188	153	30	32	9.9	6.3	5.7
29	15	11	18	27	-	220	133	22	39	12	6.3	5.1
30	15	11	21	26	-	290	158	23	30	9.5	7.5	5.1
31	12	-	20	19	-	278	-	24	-	8.3	6.3	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
October.....					222.8	16	4.1	7.19	442			
November.....					402.2	58	8.5	13.4	798			
December.....					618.9	118	8.0	20.0	1,230			
Calendar year 1940.....					21,490.4	1,120	.2	58.7	42,630			
January.....					643	90	11	20.7	1,280			
February.....					1,084	103	18	38.7	2,150			
March.....					4,306	290	80	139	8,640			
April.....					5,135	278	111	171	10,180			
May.....					2,632	158	22	72.0	4,430			
June.....					966	57	18	32.2	1,920			
July.....					400.2	25	8.3	12.9	794			
August.....					200.1	11	4.8	6.45	397			
September.....					182.1	9.1	5.1	6.07	361			
Water year 1940-41.....					16,390.3	290	4.1	44.9	32,520			

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of assumed error in gage readings.

e Gage reading not representative of average for day; discharge computed on basis of gage reading, observer's notes, and records for nearby stations.

## Unity Reservoir near Unity, Oreg.

Reference mark, lat. 44°30', long. 118°11', in SW¼ sec. 21, T. 12 S., R. 37 E., at Unity Dam on Burnt River, just downstream from Job Creek, half a mile downstream from confluence of North, Middle, and South Forks of Burnt River, and 4½ miles north of Unity. Elevation of reference mark is 3,828.0 feet (revised) above mean sea level (datum of Bureau of Reclamation). Drainage area, 309 square miles. Records available, March 1938 to September 1941. Maximum contents observed during year, 25,220 acre-feet Apr. 11 to May 26 (elevation, 3,820.0 feet); minimum observed, 5,364 acre-feet Oct. 1, 2 (elevation, 3,792.7 feet). Maximum contents observed during period 1938-41, 25,570 acre-feet May 5, 1939 (elevation, 3,820.35 feet); minimum observed, 2,710 acre-feet Oct. 5, 1938 (elevation, 3,787.0 feet).

Reservoir is formed by earth-fill dam, completed by Bureau of Reclamation in 1937; storage began Feb. 19, 1938. Capacity, 25,220 acre-feet between elevations 3,776.5 feet (bottom of outlet gates) and 3,820.0 feet (top of radial gates on spillway when closed). Dead storage, 600 acre-feet below elevation 3,776.5 feet. Records given herein represent usable contents. Water used for irrigation of lands in Burnt River irrigation district near Hereford and Bridgeport. Water surface elevation measured or estimated once daily by employee of Burnt River Irrigation District. Monthly contents computed from capacity table based on surveys by Bureau of Reclamation.

Monthly elevation and contents, water year October 1940 to September 1941

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30.....	3,792.6	5,312	-
Oct. 31.....	3,796.8	7,634	+2,322
Nov. 30.....	3,799.4	9,222	+1,588
Dec. 31.....	3,802.0	10,900	+1,678
Calendar year 1940...	-	-	+3,786
Jan. 31.....	3,804.2	12,400	+1,500
Feb. 28.....	3,804.5	12,610	+210
Mar. 31.....	3,814.6	20,430	+7,820
Apr. 30.....	3,820.0	25,220	+4,790
May 31.....	3,819.5	24,760	-460
June 30.....	3,818.0	23,410	-1,350
July 31.....	3,813.8	19,750	-3,660
Aug. 31.....	3,806.3	13,900	-5,850
Sept. 30.....	3,806.1	13,750	-150
Water year 1940-41...	-	-	+8,438

## Burnt River near Hereford, Oreg.

Location.- Water-stage recorder and concrete weir with steel crest, lat. 44°30', long. 118°11', in SE¼ sec. 21, T. 12 S., R. 37 E., at entrance of canyon, 1,250 feet downstream from Unity Dam, 0.7 mile downstream from South Fork of Burnt River and 7 miles west of Hereford.

Records available.- March 1915 to September 1916, October 1928 to September 1941 (incomplete prior to water year 1929-30).

Drainage area.- 309 square miles.

Average discharge.- 12 years (1929-41), 60.2 second-feet.

Extremes.- Maximum discharge during year, 327 second-feet Apr. 13 (gage height, 2.61 feet); no flow Oct. 1.

1915-16, 1928-41: Maximum discharge, 1,510 second-feet Apr. 14, 1936 (gage height, 6.91 feet); minimum before construction of Unity Reservoir Dam, 1.6 second-feet Aug. 31, 1935 (gage height, 0.92 foot).

Remarks.- Records good. Many small diversions above station for irrigation. Some regulation from reservoir (capacity, about 700 acre-feet) on South Fork of Burnt River, 3 miles above mouth (capacity about 700 acre-feet), and by Unity Reservoir (see preceding page).

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

0.0	0	0.4	18	1.0	72	1.6	146	2.3	267
.1	3.0	.6	34	1.2	95	1.8	177	2.6	325
.2	7.0	.8	51	1.4	119	2.0	212		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	8.0	8.0	9.0	33	119	55	180	75	96	87	85
2	3.0	8.5	8.0	9.0	35	152	57	203	74	96	85	81
3	1.8	8.5	8.0	9.0	35	167	57	319	71	96	103	75
4	2.7	8.5	8.0	7.0	35	169	57	317	95	95	99	72
5	4.2	8.5	8.0	5.4	34	180	116	317	107	79	68	71
6	6.6	8.5	8.5	5.4	35	199	179	315	105	68	65	68
7	6.6	8.5	8.5	5.4	37	214	180	311	101	78	63	65
8	3.4	8.5	8.5	5.4	37	243	120	309	99	76	63	63
9	3.8	8.5	8.5	5.4	39	265	59	273	97	75	62	62
10	3.8	8.5	8.5	5.4	40	177	56	115	97	74	60	107
11	5.4	8.5	8.5	5.4	41	149	182	36	96	73	60	107
12	5.8	8.5	8.5	5.4	41	181	248	54	101	72	57	32
13	5.8	8.5	8.5	5.4	40	164	279	68	106	72	58	2.1
14	7.0	8.5	8.5	5.4	40	167	a296	54	105	71	103	1.8
15	7.5	8.5	8.5	5.4	39	169	315	52	103	70	89	1.8
16	6.2	8.5	8.5	5.8	37	174	313	50	103	70	94	1.5
17	5.8	8.5	9.0	5.8	38	186	290	49	101	70	126	1.5
18	8.0	8.5	9.0	5.8	39	205	289	48	101	89	126	1.2
19	11	8.5	9.0	5.8	39	217	258	46	100	105	124	1.2
20	12	8.5	9.5	5.8	40	228	256	140	100	102	120	1.2
21	12	8.5	9.0	6.2	43	235	175	135	100	102	112	.9
22	11	8.5	9.0	6.2	58	239	152	132	100	101	109	.9
23	11	9.0	9.0	6.2	55	241	149	123	100	100	105	.9
24	9.0	9.0	9.0	6.2	59	241	148	123	100	100	105	.9
25	7.5	9.0	9.0	7.5	60	159	145	58	99	100	105	.9
26	7.0	8.0	9.0	9.5	60	46	143	71	99	97	103	5.8
27	7.0	8.0	9.0	14	58	48	142	79	99	96	101	7.5
28	7.5	8.0	9.0	19	72	47	140	76	99	94	97	37
29	7.5	8.0	9.0	23	-	48	139	75	97	94	95	57
30	7.5	8.0	9.0	26	-	51	138	75	97	90	93	56
31	8.0	-	9.0	30	-	53	-	75	-	88	89	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	205.4	12	0	6.63	407
November.....	251.5	9.0	8.0	8.38	499
December.....	269.0	9.5	8.0	8.68	534
Calendar year 1940.....	20,786.7	448	0	56.8	41,220
January.....	275.2	30	5.4	8.88	546
February.....	1,219	72	33	43.5	2,420
March.....	5,111	265	46	165	10,140
April.....	5,102	315	55	170	10,120
May.....	4,308	319	36	139	8,540
June.....	2,927	107	71	97.6	5,810
July.....	2,690	105	68	86.8	5,340
August.....	2,826	126	57	91.2	5,610
September.....	1,068.1	107	.9	35.6	2,120
Water year 1940-41.....	26,252.2	319	0	71.9	52,090

a No gage-height record; discharge interpolated.

## Powder River at Salisbury, Oreg.

Location.- Water-stage recorder, lat. 44°39', long. 117°52', in NE¼ sec. 36 T. 10 S., R. 39 E., 700 feet downstream from Salisbury siding of Sumpter Valley R. R. and Stices Gulch and 8½ miles south of Baker. Datum of gage is 5,633.84 feet above mean sea level (Oregon State Highway Department bench mark).

Drainage area.- 230 square miles.

Records available.- December 1903 to August 1914 and October 1928 to September 1941, in reports of Geological Survey. January 1904 to July 1914 and June 1926 to September 1936, in reports of State engineer.

Average discharge.- 23 years (1904-13, 1926-28, 1929-41), 108 second-feet.

Extremes.- Maximum discharge during year, 695 second-feet May 2 (gage height, 4.72 feet); minimum, 11 second-feet Oct. 1 (gage height, 1.30 feet).  
1903-14, 1926-41: Maximum discharge, 1,820 second-feet Mar. 20, 1910 (gage height, 7.05 feet, site and datum then in use); no flow Aug. 31, 1909, Sept. 7, 1931.

Remarks.- Records good except those for periods of ice effect, which are poor. Diversions above station for irrigation.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 2

Apr. 3 to Sept. 30

1.3	11	2.6	194	1.4	20	2.9	261
1.4	17	2.9	255	1.6	36	3.2	328
1.6	35	3.2	320	1.8	60	3.5	397
1.8	58	3.5	389	2.0	89	3.8	468
2.0	87	3.8	460	2.3	140	4.2	565
2.3	138			2.6	199	4.7	690

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	39	52	b44	46	200	400	548	287	122	34	48
2	33	61	53	b41	48	179	450	682	263	136	32	54
3	33	50	53	b40	b48	186	434	630	272	144	30	59
4	31	44	54	b45	b49	179	402	565	246	126	27	59
5	29	44	59	b56	b48	190	386	509	227	107	27	59
6		27	46	59	b55	50	190	340	439	261	97	27
7		23	59	56	b54	b51	200	310	397	468	102	26
8		19	58	54	b53	b52	244	292	374	374	95	25
9		19	56	54	52	53	283	301	337	337	88	24
10		18	51	48	50	56	285	358	328	303	77	23
11		17	48	39	48	57	283	335	362	287	74	24
12		19	45	b30	47	57	272	303	466	270	68	27
13		16	46	b20	47	57	251	287	608	274	64	27
14		15	43	b21	48	56	226	276	672	270	63	26
15		16	b44	b23	48	b55	226	279	478	263	59	26
16		16	b43	b25	47	b54	263	276	427	242	54	24
17		16	43	b28	46	56	329	261	408	234	50	21
18		16	b41	b31	48	64	394	240	381	244	48	25
19		16	b39	b36	50	65	373	215	337	253	47	26
20		16	b37	b41	52	65	343	201	294	232	43	25
21		16	36	*b50	53	71	316	195	281	201	39	25
22		16	35	54	54	76	305	197	303	179	40	25
23		16	b35	56	54	82	289	209	328	163	35	26
24		23	b34	56	56	89	266	238	353	169	34	21
25		26	33	53	53	82	259	274	365	165	33	29
26		37	b54	53	50	81	272	292	335	160	32	39
27		48	35	56	b48	87	294	310	314	138	40	39
28		35	39	53	46	138	334	326	303	150	44	39
29		35	47	52	b48	-	361	346	294	146	39	44
30		34	51	50	b49	-	407	379	287	131	34	56
31		37	-	b48	b48	-	396	-	303	-	32	51
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						731	48	13	23.6	1,450		
November.....						1,316	61	33	43.9	2,610		
December.....						1,417	59	20	45.7	2,810		
Calendar year 1940.....						37,626.0	630	1.7	103	74,630		
January.....						1,530	56	40	49.4	3,030		
February.....						1,793	132	46	64.0	3,560		
March.....						8,595	407	179	277	17,050		
April.....						9,112	450	195	304	18,070		
May.....						12,608	682	281	407	25,010		
June.....						7,169	468	131	240	14,260		
July.....						2,072	144	32	66.8	4,110		
August.....						920	56	21	29.7	1,820		
September.....						1,243	59	26	41.4	2,470		
Water year 1940-41.....						48,526	682	13	133	96,250		

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

## Powder River near Robinette, Oreg.

Location.- Staff gage, lat. 44°46', long. 117°04', in SE $\frac{1}{4}$  sec. 22, T. 9 S., R. 46 E., downstream from all tributaries, 2 miles northwest of Robinette and 2 $\frac{1}{2}$  miles above mouth.

Drainage area.- 1,710 square miles.

Records available.- September 1928 to September 1941.

Average discharge.- 13 years, 416 second-feet.

Extremes.- Maximum discharge observed during year, 2,300 second-feet May 14 (gage height, 4.40 feet); minimum observed, 101 second-feet Aug. 9, 10 (gage height, 0.90 foot). 1928-41: Maximum discharge observed, 4,180 second-feet June 15, 16, 1933 (gage height, 6.9 feet, site and datum then in use); minimum observed, 18 second-feet Sept. 2-10, 1930.

Remarks.- Records fair. Many diversions above station for irrigation, none below. One canal with capacity of about 5 second-feet diverts around station on left bank. Gage read twice daily.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.9	101	2.6	810
1.1	147	3.0	1,070
1.4	235	3.5	1,450
1.8	390	4.0	1,900
2.2	580	4.5	2,400

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	330	318	260	b300	555	1,370	1,620	1,560	1,280	1,230	155	225
2	318	555	249	b280	540	1,580	1,710	1,400	1,240	1,230	152	265
3	310	452	252	b270	525	1,350	1,800	1,530	1,390	1,180	150	246
4	298	394	252	b350	510	1,250	1,840	1,570	1,420	1,040	140	326
5	286	378	274	346	505	1,210	2,000	1,560	1,470	1,010	135	278
6	282	366	278	310	535	1,270	2,050	1,500	1,520	876	140	222
7	246	399	298	318	596	1,290	1,850	1,460	1,980	798	125	235
8	222	374	334	326	662	1,220	1,660	1,480	1,900	668	119	225
9	216	370	338	314	732	1,160	1,650	1,440	1,860	608	105	209
10	186	356	270	298	798	1,160	1,540	1,540	1,970	495	103	206
11	186	370	216	286	935	1,180	1,510	1,660	1,920	412	119	197
12	191	358	177	260	702	1,130	1,480	1,840	2,050	350	130	209
13	186	326	b150	274	652	1,130	1,430	2,230	2,150	294	135	216
14	183	326	b110	318	668	1,100	1,390	2,200	1,990	294	137	219
15	171	302	b120	306	624	1,040	1,350	1,950	1,950	252	128	229
16	169	252	b150	322	570	1,010	1,290	2,000	1,970	222	128	216
17	166	278	b180	334	500	1,010	1,130	1,760	1,900	209	125	197
18	163	266	209	358	476	1,110	1,080	1,620	1,860	225	121	194
19	160	263	235	358	662	1,290	1,080	1,550	1,830	216	145	191
20	158	252	310	458	618	1,310	1,070	1,520	1,780	246	152	194
21	152	263	318	386	694	1,250	1,050	1,470	1,770	225	142	219
22	150	274	318	417	635	1,230	1,010	1,350	1,840	225	142	203
23	152	266	366	471	679	1,160	922	1,430	1,750	197	147	200
24	330	266	338	540	690	1,120	864	1,660	1,680	186	145	188
25	580	235	350	608	750	1,060	883	1,690	1,500	186	163	183
26	252	229	354	840	714	1,060	922	1,490	1,280	194	191	174
27	417	222	810	732	714	1,110	922	1,430	1,200	197	197	180
28	322	242	555	596	916	1,180	980	1,200	1,340	213	209	174
29	374	256	476	570	-	1,190	1,070	1,150	1,400	222	229	166
30	346	249	350	570	-	1,270	1,520	1,100	1,310	203	232	169
31	286	-	346	560	-	1,350	-	1,300	-	166	229	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	7,848	580	150	253	15,570
November.....	9,533	555	222	318	18,910
December.....	9,243	810	110	298	18,350
Calendar year 1940.....	189,209	2,750	43	517	375,300
January.....	12,676	840	260	409	25,140
February.....	18,147	935	476	648	35,990
March.....	37,170	1,580	1,010	1,199	73,730
April.....	40,573	2,050	864	1,352	80,480
May.....	48,290	2,230	1,100	1,571	96,580
June.....	50,400	2,150	1,200	1,680	99,970
July.....	14,069	1,230	166	454	27,910
August.....	4,570	232	103	161	9,260
September.....	6,453	346	166	215	12,800
Water year 1940-41.....	259,472	2,230	103	711	514,700

b Stage-discharge relation affected by ice.

## Imnaha River at Imnaha, Oreg.

Location.— Water-stage recorder, lat. 45°34', long. 116°51', in SW¼ sec. 16, T. 1 N., R. 48 E., at Imnaha, three-eighths of a mile downstream from Sheep Creek.

Drainage area.— 705 square miles.

Records available.— June 1928 to September 1941.

Average discharge.— 13 years, 407 second-feet.

Extremes.— Maximum discharge during year, 2,740 second-feet June 8 (gage height, 4.85 feet); minimum, 50 second-feet Dec. 14 (gage height, 1.09 feet).

1928-41: Maximum discharge, 4,800 second-feet May 1, 1938 (gage height, 6.27 feet), from rating curve extended above 3,000 second-feet; minimum, 35 second-feet Jan. 26, 1936, Jan. 8, 1937.

Remarks.— Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.2	65	2.0	295	3.2	950	4.5	2,300
1.4	102	2.4	475	3.6	1,270	5.0	2,930
1.7	182	2.8	690	4.0	1,700		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	273	340	223	189	199	788	956	1,700	1,400	1,240	261	182
2	223	425	220	161	196	915	1,050	1,700	1,310	1,150	249	196
3	327	465	223	158	185	750	1,080	1,680	1,310	1,250	235	242
4	344	445	223	b220	182	630	958	1,560	1,310	1,140	223	220
5	314	420	227	216	176	564	1,020	1,440	1,250	1,070	220	206
6	285	416	238	223	185	500	929	1,240	1,250	983	213	196
7	257	455	234	216	199	465	845	1,090	1,380	943	199	202
8	242	525	251	206	192	470	798	1,030	2,620	566	196	209
9	234	505	227	199	196	490	810	972	2,440	768	192	192
10	223	465	202	182	199	485	880	972	2,060	696	192	185
11	213	455	185	176	209	475	845	1,120	1,390	640	202	182
12	202	389	130	173	216	465	817	1,590	1,860	613	223	196
13	196	327	b90	189	206	445	838	1,580	1,930	569	209	192
14	189	366	b65	206	199	402	859	1,720	1,580	536	192	192
15	182	348	b140	206	185	398	922	1,420	1,800	500	155	192
16	179	340	b190	199	182	389	873	1,340	1,640	480	179	185
17	173	327	b230	196	199	416	817	1,350	1,560	450	176	179
18	167	318	b240	199	192	500	750	1,260	1,680	420	170	182
19	161	297	257	209	209	525	702	1,080	1,620	389	170	223
20	158	285	242	202	202	520	679	1,000	1,450	394	192	206
21	158	289	249	202	202	490	684	1,060	1,280	371	185	199
22	158	269	242	199	202	480	708	1,190	1,240	348	179	189
23	158	234	249	199	209	465	780	1,340	1,500	340	192	182
24	173	269	277	199	227	430	873	1,560	1,250	327	189	173
25	440	246	310	202	231	425	972	1,560	1,110	310	196	170
26	335	234	297	213	223	455	1,030	1,560	958	293	216	167
27	344	231	327	196	227	520	1,180	1,600	894	306	227	164
28	318	234	310	196	281	608	1,240	1,340	1,050	327	202	164
29	310	234	285	176	-	679	1,310	1,220	1,380	322	196	161
30	318	242	269	189	-	887	1,410	1,240	1,330	285	199	158
31	327	-	249	199	-	915	-	1,430	-	269	199	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						7,581	440	158	245	15,040		
November.....						10,355	525	231	345	20,540		
December.....						7,081	327	65	245	14,040		
Calendar year 1940.....						162,259	1,640	65	443	321,800		
January.....						6,095	223	158	197	12,090		
February.....						5,710	281	176	204	11,330		
March.....						16,926	915	389	546	33,570		
April.....						27,625	1,410	879	921	54,790		
May.....						42,244	1,590	972	1,563	83,790		
June.....						45,962	2,620	894	1,532	91,160		
July.....						18,630	1,250	269	601	36,950		
August.....						6,261	261	170	202	12,420		
September.....						5,686	242	158	190	11,280		
Water year 1940-41.....						200,156	2,620	65	548	397,000		

b Stage-discharge relation affected by ice.



## Salmon River near Obsidian, Idaho

Location.- Water-stage recorder, lat. 43°58', long. 114°48', in sec. 3, T. 7 N., R. 14 E., three-eighths of a mile below irrigation diversion dam, 1 mile upstream from Lost Creek, and 2½ miles southeast of Obsidian.

Drainage area.- 94.7 square miles.

Records available.- November 1940 to September 1941.

Extremes.- Maximum discharge during period, 368 second-feet May 26; maximum gage height, 4.74 feet (ice jam) sometime between Dec. 5 and Jan. 23; minimum discharge recorded, 4 second-feet July 21 to Aug. 11.

Remarks.- Records good except those for periods of ice effect or faulty or no gage-height record, which are poor. Several diversions above station for irrigation.

Rating table, Nov. 7, 1940, to Sept. 30, 1941, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Nov. 7 to Dec. 5, Jan. 23-26)

1.4	3.6	2.4	74
1.6	9.6	2.6	101
1.8	20	3.0	180
2.0	32	3.4	279
2.2	51	3.8	384

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	a27	b20		22		126	222	45	4	24
2			a27	b20		22		125	197	39	4	25
3			26			21	a30	139	214	36	4	26
4			26		a17	a20		146	215	35	4	25
5			a26			20		142	212	31	4	24
6		-				a20		123	214	29	4	24
7		34	a25		17	a21		119	236	27	4	24
8		32	a25		17	a23	a35	125	259	25	4	24
9		32	a25		18	a25		119	242	18	4	24
10		a28			18	a24		130	226	14	4	24
11		a27			18	a23		173	229	9	4	24
12		a27			20	a23		254	234	9	14	25
13		a27		a20	a20	a21	a40	289	246	8	16	24
14		a25			19			256	252	8	15	24
15		24			a19		31	234	252	6	14	26
16		a24			a19		30	219	242	6	14	31
17		24			a19		27	222	224	5	14	40
18		24			a19	a20	27	259	222	5	16	39
19					20		26	209	214	5	15	42
20			b21		a20		29	194	192	5	14	41
21					a20		31	206	173	4	21	40
22				a18	20		36	236	162	4	29	39
23		b23		18	22		38	279	155	4	29	39
24				18	22		38	310	146	4	28	38
25				19	a23		42	313	132	4	28	37
26				18	a23		48	344	117	4	28	37
27					a23	a25	61	336	112	4	27	37
28		27			a22		78	282	104	4	26	37
29		28		a18	-		100	262	70	4	24	37
30		a27			-		117	252	50	4	25	37
31		-			-		-	252	-	4	24	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						-	-	-	-	-		
November 7-30.....						617	34	-	25.7	1,220		
December.....						694	-	-	22.4	1,380		
Calendar year .....						-	-	-	-	-		
January.....						601	-	-	19.4	1,190		
February.....						540	23	-	19.3	1,070		
March.....						680	-	-	21.9	1,350		
April.....						1,244	117	-	41.5	2,470		
May.....						6,654	344	119	215	13,200		
June.....						5,766	259	50	192	11,440		
July.....						409	45	4	13.2	811		
August.....						465	29	4	15.0	922		
September.....						938	42	24	31.3	1,860		
The period.....						-	-	-	-	36,910		

a Fragmentary or no gage-height record; discharge computed on basis of available gage heights, weather records, and records for other Salmon River stations.  
b Stage-discharge relation affected by ice.

## Salmon River below Valley Creek, at Stanley, Idaho

Location.— Water-stage recorder, lat. 44°14', long. 114°55', in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 34, T. 11 N., R. 13 E., three-quarters of a mile downstream from Valley Creek and  $\frac{1}{4}$  mile northeast of Stanley. Datum of gage is 6,190.32 feet above mean sea level, datum of 1929.

Drainage area.— 535 square miles.

Records available.— July 1925 to September 1941.

Average discharge.— 16 years, 560 second-feet.

Extremes.— Maximum discharge during year, 2,320 second-feet May 27 (gage height, 2.89 feet); minimum daily, 180 second-feet Dec. 14.

1925-41: Maximum discharge, 5,020 second-feet June 27, 1927 (gage height, 4.41 feet), from rating curve extended above 4,000 second-feet; minimum, 100 second-feet (estimated) Nov. 20-30, 1929.

Remarks.— Records good. Diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	396	396	364	a280	a300	a310	396	818	1,520	817	364	396
2	598	443	353	a270			451	828	1,350	769	353	396
3	606	429	353	a270			429	867	1,400	741	347	403
4	494	390	353	h282			398	949	1,420	713	341	390
5	458	358	335				410	1,060	1,350	695	335	390
6	443	396	335	a330	h307	a290	390	969	1,340	685	329	383
7	429	416	318				396	877	1,470	667	324	370
8	416	429	312				429	969	1,740	624	335	370
9	403	410	312	h297			451	877	1,540	589	396	364
10	390	383	272				487	847	1,420	565	429	358
11	383	370	h250	a290	h307	a280	458	906	1,370	541	465	358
12	383	341	h230				502	1,100	1,420	509	632	390
13	383	a325	h200				533	1,420	1,520	487	502	377
14	377	a340	a180				541	1,510	1,660	480	451	370
15	370	353	a210	a340			557	1,430	1,700	465	436	383
18	358	353	a250		a300	a310	494	1,320	1,680	451	423	383
17	358	358	a260	h335			451	1,290	1,600	436	423	383
18	353	364	a270				429	1,300	1,610	436	487	383
19	347	347	h277	a340			410	1,290	1,780	443	517	403
20	347	347	a290				443	1,210	1,650	429	494	410
21	347	353	a300	a300	h302	h292	472	1,200	1,460	410	472	396
22	353	329	a300	a300	a300		494	1,250	1,350	396	490	390
23	358	312	a300	h292	a300		541	1,440	1,310	390	490	390
24	358	329	a300	a290	a300		557	1,680	1,280	377	458	390
25	423	341	a310	h292	a290		565	1,770	1,210	370	451	383
26	410	329	a310	a290	a270	h318	598	2,020	1,110	377	451	377
27	436	335	h312	a270	a290		632	2,240	1,050	396	443	370
28	403	347	a280	a290	h307		676	1,950	1,020	403	429	364
29	390	390	a280	a300	-		704	1,700	958	396	423	364
30	390	377	a290	h292	-		769	1,600	857	377	416	364
31	390	-	a300	a290	-		-	1,600	-	370	403	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October.....	12,550	606	347	405	0.757	0.87	24,890
November.....	10,990	443	312	366	.684	.76	21,800
December.....	9,006	364	180	291	.544	.63	17,860
Calendar year 1940.....	212,326	2,320	180	580	1.08	14.76	421,100
January.....	9,460	340	270	305	.570	.66	18,760
February.....	8,423	310	270	301	.563	.59	16,710
March.....	9,358	370	272	302	.564	.65	18,560
April.....	15,061	769	390	502	.938	1.05	29,870
May.....	40,309	2,240	818	1,300	2.43	2.80	79,950
June.....	42,135	1,780	857	1,404	2.63	2.92	83,570
July.....	15,804	817	370	510	.963	1.10	31,350
August.....	13,289	632	324	429	.802	.92	26,360
September.....	11,448	410	358	382	.714	.80	22,710
Water year 1940-41.....	197,833	2,240	180	542	1.01	13.75	392,400

a No gage-height record; discharge interpolated or computed on basis of records for station below Yankee Fork, near Clayton.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

## Salmon River below Yankee Fork, near Clayton, Idaho

Location.- Water-stage recorder, lat. 44°16', long. 114°44', in sec. 20, T. 11 N., R. 15 E., a quarter of a mile downstream from Sunbeam Dam and Yankee Fork and 18 miles upstream from Clayton.

Drainage area.- 841 square miles.

Records available.- October 1921 to September 1941.

Average discharge.- 18 years (1922-24, 1925-41), 823 second-feet.

Extremes.- Maximum discharge during year, 3,370 second-feet May 26, 27 (gage height, 6.27 feet); minimum daily, 230 second-feet Dec. 14; minimum gage height recorded, 1.89 feet Feb. 26.

1921-41: Maximum discharge, 8,000 second-feet (estimated) June 27, 1927; minimum, 160 second-feet (estimated) Nov. 25-30, 1929.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. No diversions above station for irrigation except those above Stanley.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.8	237	3.4	1,040
2.1	354	3.8	1,300
2.4	492	4.6	1,880
2.7	642	5.4	2,530
3.0	803	6.2	3,270

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	546	531	458	358	358	403	611	1,340	2,280	1,140	502	502
2	779	576	468	b540	376	403	705	1,340	2,080	1,070	487	512
3	832	571	468	b540	350	385	689	1,400	2,120	1,010	473	521
4	710	526	458	b370	363	363	632	1,610	2,160	980	463	507
5	642	468	439	412	367	398	627	1,580	2,080	950	454	497
6	601	541	464	a430	372	376	591	1,480	2,040	920	444	492
7	586	546	430	a450	385	354	596	1,340	2,200	890	439	478
8	571	566	426	a410	380	376	627	1,400	2,620	860	444	478
9	556	551	435	b389	380	376	678	1,340	2,360	832	512	468
10	541	502	358	a380	380	354	726	1,340	2,160	776	606	468
11	541	487	b330	a370	389	358	694	1,510	2,120	754	596	463
12	541	412	b310	a370	389	350	716	1,960	2,120	726	590	507
13	516	403	b270	a380	360	359	776	2,440	2,200	694	568	497
14	521	449	b280	a410	369	368	776	2,440	2,360	689	596	482
15	512	473	b280	a480	360	367	832	2,280	2,360	663	571	497
16	507	468	b320	a430	354	389	754	2,120	2,280	642	556	502
17	497	482	b350	a400	358	394	684	2,080	2,160	627	546	492
18	492	502	b370	a420	367	430	632	2,200	2,160	616	616	482
19	487	454	380	a420	376	421	611	2,040	2,360	627	668	507
20	482	426	394	a390	372	421	637	1,920	2,160	606	647	521
21	482	482	398	b380	363	398	663	1,960	1,920	581	616	502
22	487	430	398	a370	376	412	694	2,120	1,800	556	606	492
23	492	398	403	a370	376	416	764	2,440	1,680	556	611	487
24	482	426	407	a370	376	403	832	2,710	1,650	516	586	487
25	566	458	407	a390	363	403	860	2,710	1,540	516	576	478
26	566	426	407	385	325	436	920	3,070	1,440	536	571	473
27	531	426	421	342	367	468	980	3,270	1,370	551	566	468
28	551	468	380	354	399	497	1,070	2,980	1,370	571	551	458
29	536	512	376	367	-	531	1,100	2,530	1,300	576	531	458
30	526	487	398	358	-	576	1,270	2,440	1,200	531	536	464
31	526	-	407	358	-	586	-	2,360	-	516	516	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	17,246	832	482	566	0.661	0.76	34,200
November.....	14,437	576	398	481	.572	.64	28,640
December.....	12,030	468	230	388	.461	.53	23,560
Calendar year 1940.....	306,995	3,770	230	836	.994	13.54	607,000
January.....	11,993	480	340	387	.460	.53	23,790
February.....	10,340	389	325	369	.439	.46	20,510
March.....	12,770	586	338	412	.490	.56	25,330
April.....	22,747	1,270	691	768	.901	1.01	45,120
May.....	63,650	3,270	1,340	2,053	2.44	2.81	126,200
June.....	69,650	2,620	1,200	1,988	2.36	2.63	118,500
July.....	22,058	1,140	516	712	.847	.98	43,750
August.....	17,444	890	439	563	.669	.77	34,600
September.....	14,630	521	454	488	.580	.65	29,020
Water year 1940-41.....	278,994	3,270	230	764	.908	12.33	553,300

a No gage-height record; discharge computed on basis of records for station near Challis.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

## Salmon River near Challis, Idaho

Location.- Water-stage recorder, lat. 44°23', long. 114°15', in sec. 7, T. 12 N., R. 19 E., 250 feet downstream from Bayhorse Creek and 9 miles south of Challis. Datum of gage is 5,163.99 feet above mean sea level, datum of 1929.

Drainage area.- 1,740 square miles.

Records available.- October 1928 to September 1941.

Average discharge.- 13 years, 1,176 second-feet.

Extremes.- Maximum discharge during year, 5,350 second-feet May 27 (gage height, 6.05 feet); minimum, 160 second-feet Dec. 14 (gage height, 0.95 foot).  
1928-41: Maximum discharge, 9,790 second-feet June 2, 1936 (gage height, 7.83 feet); minimum, that of Dec. 14, 1940.

Remarks.- Records good. Some diversion above station for irrigation.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used July 28 to Sept. 30)

1.3	267	3.0	1,135	5.0	3,380
1.6	378	3.4	1,450	5.4	4,060
1.9	507	3.8	1,820	5.8	4,820
2.2	657	4.2	2,260	6.2	5,690
2.6	878	4.6	2,750		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	- 875	792	673	466	498	636	803	1,680	3,380	1,970	878	798
2	1,000	820	705	415	590	668	908	1,680	3,070	1,820	849	786
3	1,280	849	689	407	590	641	938	1,770	3,070	1,820	809	780
4	1,100	809	678	469	536	595	849	1,870	3,220	1,770	781	803
5	1,030	705	652	626	493	606	849	1,930	3,070	1,720	759	786
6	969	764	668	662	521	615	803	1,920	3,000	1,680	748	775
7	908	786	636	669	636	590	792	1,720	3,140	1,680	737	764
8	908	814	621	641	652	565	809	1,770	3,970	1,600	732	764
9	878	814	647	626	610	570	849	1,720	3,620	1,410	798	748
10	849	753	617	616	610	541	908	1,680	3,380	1,360	938	737
11	849	721	466	610	615	526	908	1,870	3,300	1,280	908	726
12	820	641	468	610	626	512	878	2,510	3,380	1,250	1,460	775
13	820	541	362	615	570	536	969	3,460	3,540	1,210	1,260	781
14	809	626	270	662	560	507	938	3,460	3,880	1,170	1,060	769
15	798	694	343	742	545	602	1,030	3,140	3,970	1,170	969	763
16	786	705	390	678	512	560	1,000	2,920	3,800	1,100	938	770
17	775	721	462	657	517	570	908	2,860	3,540	1,100	878	763
18	764	759	610	678	560	600	849	3,140	3,380	1,060	969	748
19	753	699	732	684	636	600	814	2,920	3,620	1,100	1,000	742
20	748	621	694	667	610	600	849	2,710	3,380	1,030	1,030	809
21	742	715	684	652	575	575	849	2,710	3,070	1,000	1,000	798
22	748	647	678	626	600	570	878	3,070	2,800	969	969	775
23	753	555	668	615	626	575	938	3,620	2,800	938	969	775
24	748	595	662	590	626	565	1,000	4,150	2,700	908	938	781
25	798	710	647	610	605	570	1,030	4,150	2,600	938	908	775
26	849	641	631	605	545	590	1,100	4,720	2,400	969	908	769
27	849	631	657	531	521	636	1,170	5,140	2,260	938	878	763
28	849	699	595	463	610	678	1,280	4,620	2,200	969	849	742
29	809	737	440	484	-	705	1,410	3,880	2,140	1,000	820	742
30	798	737	512	439	-	753	1,580	3,540	1,980	938	820	732
31	786	-	621	494	-	775	-	3,460	-	908	814	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	26,451	1,280	742	853	0.490	0.56	52,460
November.....	21,501	849	541	710	.408	.46	42,260
December.....	18,068	732	270	583	.335	.39	35,620
Calendar year 1940.....	448,869	5,460	270	1,226	.706	9.60	890,400
January.....	18,378	742	407	593	.341	.39	36,450
February.....	16,200	662	498	579	.333	.35	32,130
March.....	18,621	775	502	597	.343	.40	36,740
April.....	28,886	1,580	792	963	.553	.62	57,290
May.....	39,730	5,140	1,680	2,895	1.66	1.81	178,000
June.....	93,660	3,970	1,980	3,122	1.79	2.00	185,800
July.....	38,475	1,870	908	1,241	.713	.82	76,310
August.....	28,354	1,450	732	915	.526	.61	56,240
September.....	23,029	820	726	768	.441	.49	45,680
Water year 1940-41.....	421,043	5,140	270	1,154	.663	9.00	835,200

a No gage-height record; discharge computed on basis of records for station at Salmon.

b Computed from staff-gage reading.

## Salmon River at Salmon, Idaho

Location.- Water-stage recorder, lat. 45°11', long. 113°54', in sec. 6, T. 21 N., R. 22 E., just upstream from Lemhi River near Rose ranch buildings, 1,000 feet downstream from island and three-eighths of a mile downstream from highway bridge at Salmon.

Drainage area.- 3,600 square miles.

Records available.- April 1912 to September 1916, July 1919 to September 1941.

Average discharge.- 24 years (1913-16, 1920-41), 1,717 second-feet.

Extremes.- Maximum discharge during year, 5,740 second-feet May 27 (gauge height, 5.27 feet); minimum, 488 second-feet Dec. 15, 16 (gauge height, 2.15 feet).

1912-16, 1919-41: Maximum discharge observed, 16,400 second-feet June 12, 1921 (gauge height, 9.35 feet, staff gauge at site 700 feet upstream); minimum, 242 second-feet Jan. 8, 1937 (gauge height, 1.50 feet).

Remarks.- Records good. Diversions above station for irrigation.

Rating table, water year 1940-41 (gauge height, in feet, and discharge, in second-feet)

2.2	525	3.1	1,460	4.3	3,500
2.5	750	3.5	2,050	4.7	4,350
2.8	1,090	3.9	2,750	5.3	5,850

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	al, 500	1,260	1,180	906	828	1,110	1,170	1,700	4,040	2,300	1,190	1,260
2	al, 600	1,260	1,100	690	546	1,200	1,200	1,800	3,710	2,210	1,170	1,190
3	al, 580	1,290	1,140	639	917	1,120	1,300	1,800	3,600	2,210	1,110	1,170
4	al, 700	1,300	1,110	690	917	1,050	1,250	1,910	3,820	2,130	1,020	1,190
5	hl, 560	1,240	1,100	780	875	991	1,230	2,030	3,710	2,130	980	1,160
6	al, 500	1,170	1,090	928	846	1,010	1,200	2,130	3,600	2,020	948	1,140
7	al, 450	1,240	1,080	1,060	375	1,000	1,160	2,020	3,600	2,020	928	1,120
8	1,450	1,240	1,040	1,040	1,000	980	1,140	1,880	4,260	1,940	896	1,110
9	1,430	1,280	1,050	948	980	991	1,140	1,880	4,610	1,840	896	1,120
10	1,410	1,270	1,060	970	928	959	1,180	1,770	4,260	1,760	991	1,110
11	1,370	1,180	928	917	938	938	1,240	1,780	3,930	1,680	1,110	1,110
12	1,360	1,160	818	856	959	906	1,220	2,130	3,820	1,660	1,320	1,110
13	1,330	1,080	753	866	959	906	1,220	3,100	3,820	1,600	1,920	1,140
14	1,320	1,000	573	928	896	896	1,270	3,820	4,150	1,540	1,610	1,140
15	1,300	1,090	525	1,050	896	886	1,220	3,710	4,380	1,540	1,450	1,160
16	al, 280	1,170	549	1,120	896	896	1,300	3,300	4,260	1,450	1,340	1,150
17	al, 260	1,160	664	1,090	856	980	1,270	3,100	4,040	1,420	1,280	1,150
18	al, 240	1,180	837	1,060	846	1,040	1,180	3,200	3,820	1,400	1,270	1,140
19	hl, 220	1,190	1,070	1,090	896	1,010	1,140	3,400	3,930	1,400	1,420	1,120
20	hl, 230	1,140	1,190	1,100	948	1,010	1,080	3,100	3,930	1,420	1,520	1,120
21	hl, 230	1,090	1,150	1,080	938	991	1,070	2,910	3,600	1,380	1,500	1,180
22	hl, 220	1,170	1,090	1,060	928	959	1,070	3,000	3,500	1,300	1,470	1,170
23	hl, 220	1,060	1,060	921	948	959	1,050	3,400	3,200	1,240	1,450	1,170
24	hl, 220	991	1,040	970	1,000	959	1,110	4,040	3,100	1,190	1,490	1,180
25	hl, 230	1,080	1,040	938	980	938	1,190	4,380	2,910	1,170	1,420	1,190
26	1,360	1,170	1,010	970	938	948	1,180	4,610	2,820	1,170	1,410	1,170
27	1,340	1,100	1,040	948	886	991	1,260	5,480	2,550	1,170	1,380	1,170
28	1,360	1,100	1,020	917	906	1,050	1,330	5,350	2,550	1,170	1,340	1,160
29	1,320	1,180	938	828	-	1,080	1,460	4,730	2,640	1,350	1,290	1,160
30	1,290	1,180	790	828	-	1,120	1,540	4,260	2,460	1,300	1,290	1,160
31	1,270	-	846	837	-	1,170	-	4,040	-	1,230	1,280	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	42,420	1,850	1,220	1,368	84,140
November.....	35,021	1,300	991	1,187	69,460
December.....	29,851	1,150	525	963	59,210
Calendar year 1940.....	569,693	5,720	525	1,557	1,130,000
January.....	29,165	1,120	639	941	57,850
February.....	25,626	1,000	828	915	50,830
March.....	31,044	1,200	886	1,001	61,570
April.....	36,400	1,540	1,060	1,213	72,200
May.....	95,760	5,480	1,700	3,039	189,900
June.....	108,420	4,610	2,460	3,614	215,000
July.....	49,330	2,300	1,170	1,591	97,840
August.....	39,679	1,920	996	1,230	75,700
September.....	34,610	1,260	1,110	1,154	68,650
Water year 1940-41.....	557,326	5,480	525	1,527	1,105,000

a No gauge-height record; discharge computed on basis of records for station near Challis and for Pahsimeroi River near May.

h Computed from staff-gage readings.

## Salmon River at Whitebird, Idaho

Location.- Water-stage recorder, lat. 45°45', long. 116°20', in sec. 22, T. 28 N., R. 1 E., just upstream from Whitebird Creek, half a mile downstream from Canfield-Joseph Highway bridge, and 1 mile southwest of Whitebird.

Drainage area.- 13,400 square miles.

Records available.- August 1910 to September 1917, October 1919 to September 1941.

Average discharge.- 29 years (1910-17, 1919-41), 10,150 second-feet.

Extremes.- Maximum discharge during year, 39,500 second-feet May 14 (gage height, 22.76 feet); minimum recorded, 1,860 second-feet Dec. 15 (gage height, 10.63 feet).

1910-17, 1919-41: Maximum discharge observed, 88,800 second-feet June 9, 1921 (gage height, 31.2 feet), from rating curve extended above 75,000 second-feet; minimum discharge, 1,580 second-feet Dec. 11, 1932 (gage height, 10.23 feet), from rating curve extended below 2,200 second-feet.

Maximum stage known, about 37.5 feet, present datum, June 1894 (discharge, 120,000 second-feet).

Remarks.- Records excellent. Amount of water diverted above station for irrigation is a negligible percentage of total flow.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

10.6	1,830	12.6	4,340	15.0	9,290	20.0	26,000
11.0	2,150	13.0	5,060	16.0	11,900	21.0	30,500
11.4	2,560	13.5	6,020	17.0	14,800	22.0	35,400
11.8	3,070	14.0	7,040	18.0	18,100	23.0	40,500
12.2	3,670	14.5	8,120	19.0	21,900		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,040	5,440	5,440	3,590	3,280	4,260	8,120	17,800	30,000	14,500	5,820	5,060
2	6,830	5,630	4,970	3,440	3,360	4,970	8,810	20,000	28,600	13,900	5,630	4,880
3	7,280	6,020	4,880	2,880	3,670	6,020	9,780	20,700	27,300	13,300	5,440	4,880
4	8,810	5,020	4,880	2,660	3,580	5,820	9,780	21,900	27,300	12,700	5,250	4,970
5	5,580	5,630	4,880	2,820	3,510	5,440	9,530	21,900	26,900	12,200	5,060	5,060
6	7,900	5,440	4,790	3,070	3,440	4,970	9,290	20,400	26,000	11,300	4,970	5,060
7	7,040	5,440	4,790	3,220	3,510	4,790	8,580	18,900	26,400	10,800	4,700	4,970
8	6,620	5,630	4,610	4,000	3,590	4,790	8,120	17,800	30,000	10,300	4,620	4,970
9	6,420	5,820	4,610	4,000	3,830	4,880	7,900	17,400	31,400	9,780	4,430	4,880
10	5,020	5,630	4,620	3,750	4,000	4,880	8,350	16,700	29,600	9,290	4,610	4,970
11	5,820	5,440	4,280	3,440	4,170	4,880	8,580	18,100	27,300	8,810	4,970	4,970
12	5,630	5,060	3,510	3,210	4,170	4,700	8,210	22,300	26,400	8,580	5,060	4,750
13	5,440	4,610	2,740	3,140	4,170	4,610	8,580	31,400	26,600	8,350	5,630	4,790
14	5,440	4,170	2,150	3,280	4,080	4,520	8,350	38,400	26,900	8,120	6,020	4,970
15	5,250	4,170	a2,000	3,510	3,920	4,430	8,580	34,900	26,400	7,900	5,820	5,060
16	5,250	4,430	a2,500	3,830	3,670	4,430	5,580	31,400	24,700	7,460	5,440	5,250
17	5,060	4,700	a3,000	4,000	3,510	4,810	8,350	29,600	23,100	7,460	5,060	5,440
18	4,970	5,060	a4,000	4,000	3,360	4,970	8,120	29,100	23,100	7,040	4,970	5,250
19	4,880	5,440	a5,000	4,080	3,440	5,440	7,580	27,300	26,400	7,040	4,880	5,250
20	4,790	5,060	a5,500	4,170	3,670	5,630	7,460	26,100	29,100	7,040	5,060	5,250
21	4,700	4,700	a5,200	4,170	3,830	5,630	7,460	24,300	24,700	6,830	5,250	5,440
22	4,700	4,610	4,970	4,170	3,920	5,440	7,460	25,100	21,500	6,620	5,440	5,250
23	4,700	4,610	4,880	4,080	3,920	5,250	7,680	27,300	19,600	6,220	5,440	5,250
24	4,700	4,170	4,790	4,080	4,000	5,060	8,120	31,000	18,100	6,020	5,440	5,060
25	5,060	4,000	4,790	4,000	4,080	5,060	9,050	36,400	17,100	6,020	5,630	5,060
26	5,020	4,340	4,610	4,080	4,170	5,060	9,780	36,400	16,100	5,020	5,630	4,970
27	5,020	4,610	4,610	4,080	4,000	5,250	10,800	36,900	15,400	5,020	5,630	4,880
28	5,820	4,620	4,790	3,920	3,830	5,630	12,200	35,900	15,400	6,020	5,630	4,970
29	5,630	4,610	4,620	3,590	-	6,220	13,300	32,400	15,700	6,220	5,440	4,880
30	5,440	5,060	4,170	3,360	-	7,040	15,100	30,500	15,700	6,220	5,060	4,790
31	5,440	-	3,920	3,210	-	7,680	-	29,500	-	5,220	5,250	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	183,270	8,810	4,700	5,912	363,500
November.....	150,070	6,020	4,000	5,002	297,700
December.....	134,280	5,440	2,000	4,332	266,300
Calendar year 1940.....	3,407,280	46,500	2,000	9,310	6,758,000
January.....	113,210	4,170	2,580	3,652	224,500
February.....	105,690	4,170	3,280	3,775	209,600
March.....	162,360	7,680	4,260	5,237	322,000
April.....	272,300	15,100	7,460	9,077	540,100
May.....	826,900	38,400	15,700	26,670	1,640,000
June.....	721,800	31,400	15,400	24,060	1,432,000
July.....	264,300	14,500	6,020	8,526	524,200
August.....	163,180	6,020	4,450	5,254	323,700
September.....	161,270	5,440	4,790	5,042	300,000
Water year 1940-41.....	3,248,630	38,400	2,000	8,900	6,444,000

a No gage-height record; discharge computed on basis of records for other stations in the Salmon River Basin.

## Alturas Lake Creek near Obsidian, Idaho

Location.- Water-stage recorder, lat.  $43^{\circ}56'$ , long.  $114^{\circ}50'$ , in SW $\frac{1}{4}$  sec. 9, T. 7 N., R. 14 E., 1 mile downstream from outlet of Perkins Lake,  $1\frac{1}{2}$  miles downstream from outlet of Alturas Lake, and 4 miles south of Obsidian.

Drainage area.- 35.7 square miles.

Records available.- November 1940 to September 1941.

Extremes.- Maximum discharge during period, 330 second-feet May 27 (gage height, 4.26 feet); minimum not determined, probably occurred during winter.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversion or artificial regulation above station.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	23	b18		b15	18	79	222	102	30	20
2		-	22			b15	20	89	204	96	28	20
3		-	22			b15	22	96	204	91	27	20
4		-	22			b15	22	103	204	85	26	19
5		-	*21			15	25	112	204	81	25	19
6		-	20	b18		b15	25	114	204	77	23	19
7		*24	b20			b14	25	111	213	73	23	18
8		24	b20			b14	25	111	222	70	23	18
9		24	b20			b14	25	106	222	67	23	18
10		23				*b14	29	102	204	63	23	17
11		23		b17		b14	31	102	204	60	26	17
12		b22				b13	32	119	213	56	31	18
13		b22				b13	31	175	230	53	30	18
14		22				b13	31	213	247	51	28	18
15		21				b13	31	213	247	52	28	18
16		21		b16	b15	b12	31	204	247	50	26	18
17		20				b12	31	193	238	48	26	18
18		20				12	31	181	230	46	28	17
19		b21				12	31	191	230	43	28	18
20		b21				13	31	183	213	41	28	18
21		21	b18	*b16		b13	31	178	196	40	28	18
22		b21				b13	32	190	185	37	27	17
23		b21				13	33	222	172	35	26	18
24		21				b13	35	256	166	34	25	18
25		20				b14	39	274	158	32	23	18
26		b20		b16		b14	42	302	145	31	23	17
27		b20				14	47	321	134	32	22	17
28		20				b14	53	302	127	32	22	16
29		22				15	61	274	118	32	22	16
30		23				16	69	256	109	31	21	16
31		-				17	-	238	-	30	20	-
Month				Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off			
									Inches	Acres-feet		
October.....				-	-	-	-	-	-	-		
November 7-30.....				517	24	20	21.5	0.602	0.54	1,030		
December.....				586	-	-	18.9	.529	.61	1,160		
Calendar year .....				-	-	-	-	-	-	-		
January.....				524	-	-	16.9	.473	.55	1,040		
February.....				420	-	-	15.0	.420	.44	833		
March.....				429	17	12	13.8	.387	.45	861		
April.....				989	69	18	33.0	.924	1.03	1,960		
May.....				5,620	321	79	181	5.07	5.84	11,150		
June.....				5,912	247	109	197	5.52	6.16	11,730		
July.....				1,671	102	30	53.9	1.51	1.74	3,310		
August.....				789	31	20	26.5	.714	.82	1,560		
September.....				537	20	16	17.9	.501	.56	1,070		
The period.....				-	-	-	-	-	-	35,690		

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

## Valley Creek at Stanley, Idaho

Location.- Staff gage, lat. 44°13', long. 114°56', in sec. 3, T. 10 N., R. 13 E., a quarter of a mile upstream from mouth, three-eighths of a mile downstream from upper Stanley, and three-quarters of a mile upstream from lower Stanley.

Drainage area.- 176 square miles.

Records available.- December 1910 to October 1913, May 1921 to September 1941.

Average discharge.- 21 years (1911-13, 1922-41), 175 second-feet.

Extremes.- Maximum discharge observed during year, 700 second-feet May 26, 27; maximum gage height observed, 2.72 feet May 27; minimum discharge not determined, probably occurred during winter.

1910-13, 1921-41: Maximum discharge observed, 1,850 second-feet May 29, 1921 (gage height, 4.4 feet), from rating curve extended above 1,300 second-feet; minimum, 40 second-feet (estimated) Nov. 17-30, 1929, Dec. 8-13, 1932.

Remarks.- Records fair. Gage read once daily Apr. 13 to July 3 (except Apr. 17, 25, May 2-4) and twice to four times weekly during remainder of year. Diversions above station for irrigation.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

0.9	43	2.1	378
1.2	94	2.4	525
1.5	163	2.7	700
1.8	258		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	109				85	140	315	450	258	100	103
2	207	120				83	160	355	402	240	98	102
3	172	110				92	153	395	450	240	91	102
4	138	98	(*)			100	139	435	450	232	84	102
5	128	101				92	125	475	402	224	92	96
6		104				83	111	335	402	215	100	92
7	117	112				79	130	355	425	207	104	94
8	109	120				74	148	356	610	199	107	92
9	105	109				70	152	276	450	191	114	90
10	102	98				65	156	276	425	177	122	96
11	98					60	160	315	402	163	129	101
12	96					55	184	378	402	155	160	107
13	94					60	207	475	450	146	143	105
14	92					65	258	475	525	138	141	104
15	91					80	240	425	525	143	140	102
16	91		e80	e70	e70	94	177	402	475	148	138	98
17	90					86	168	402	450	147	140	96
18	90					79	160	425	500	147	143	100
19	90					83	177	402	670	146	148	104
20	86					86	207	356	500	138	153	103
21	87		e85			90	207	356	425	130	146	102
22	88					84	240	378	402	123	138	97
23	90					79	223	450	378	115	151	92
24	90					83	240	525	378	111	121	90
25	148			(*)		86	232	552	356	109	111	90
26	137					90	223	700	315	116	109	88
27	128					82	240	700	295	124	108	88
28	120					94	258	610	295	122	106	88
29	113					-	112	276	500	276	120	104
30	107					-	129	276	475	258	113	104
31	108	-				-	134	-	475	-	107	104

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	3,485	207	86	112	0.636	0.73	6,910
November.....	2,781	120	-	92.7	.527	.59	5,520
December.....	2,480	-	-	80	.455	.52	4,920
Calendar year 1940.....	62,035	710	-	169	.960	13.12	123,000
January.....	2,170	-	-	70	.398	.46	4,300
February.....	1,960	-	-	70	.398	.41	3,890
March.....	2,644	134	55	85.3	.485	.56	5,240
April.....	5,767	276	111	192	1.09	1.22	11,440
May.....	13,350	700	276	431	2.45	2.82	26,480
June.....	12,743	670	258	425	2.41	2.69	25,280
July.....	4,944	258	107	159	.903	1.04	9,810
August.....	3,729	153	84	120	.662	.79	7,400
September.....	2,894	107	84	96.5	.548	.61	5,740
Water year 1940-41.....	58,947	700	-	161	.915	12.44	116,900

\* Winter discharge measurement made this day.

e Fragmentary gage-height record, stage-discharge relation affected by ice, or gage reading not representative of average for day; discharge computed on basis of available gage heights, two discharge measurements, weather records, and records for Salmon River below Valley Creek, at Stanley.



## Yankee Fork of Salmon River near Clayton, Idaho

Location.- Water-stage recorder, lat. 44°17', long. 114°44', in sec. 17, T. 11 N., R. 15 E., half a mile-upstream from mouth and 17 miles west of Clayton.

Drainage area.- 195 square miles.

Records available.- May 1921 to September 1941.

Average discharge.- 18 years (1922-24, 1925-41), 176 second-feet.

Extremes.- Maximum discharge during year, 965 second-feet May 26 (gage height, 4.37); minimum not determined (occurred during period of ice effect).

1921-41: Maximum discharge, 3,360 second-feet June 12, 1921 (gage height, 6.79 feet, site and datum then in use), from rating curve extended above 2,300 second-feet; minimum, 10 second-feet (estimated) Dec. 5, 6, 1927.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	81	70					a120	384	598	226	104	89	
2	116	72					a140	378	560	218	101	90	
3	136	73					133	387	598	211	98	88	
4	116	66					122	414	598	199	94	89	
5	107	54					a50	116	411	579	191	90	84
6	100	76					101	372	560	185	88	83	
7	95	69					100	346	579	179	87	81	
8	90	71					h51	105	344	660	174	87	83
9	87	70					a50	120	332	618	164	98	81
10	83	58					a45	124	361	598	161	136	81
11	80	68					h42	119	445	598	159	115	78
12	77	56					a45	115	618	579	157	191	84
13	76						a45	128	850	579	152	128	83
14	74						a45	131	800	598	159	113	80
15	73						a50	155	682	542	150	107	83
16	73		a60	148	639	504	138	102	87				
17	71					a70	156	598	461	131	98	82	
18	70					a80	124	582	445	133	111	80	
19	70					a80	108	618	445	140	120	84	
20	69					h81	109	579	405	141	128	89	
21	69					a75	104	598	372	126	115	84	
22	71					a70	109	705	352	119	111	84	
23	72					a70	130	825	330	115	111	83	
24	70					a70	161	905	311	112	108	83	
25	77					a70	179	850	276	111	101	82	
26	76									a80	216	905	273
27	75	h92	249	878	254					119	100	80	
28	73	a95	298	750	247					120	98	78	
29	71	a95	349	660	242					131	94	77	
30	71	a100	366	639	228					115	95	76	
31	70	a110	-	639	-					111	94	-	

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October.....	2,539	136	69	81.9	0.420	0.48	5,040
November.....	1,883	76	-	62.8	.322	.36	3,730
December.....	1,550	-	-	50.0	.256	.30	3,070
Calendar year 1940.....	66,660	1,430	-	182	.933	12.73	132,200
January.....	1,550	-	-	50.0	.256	.30	3,070
February.....	1,260	-	-	45.0	.231	.24	2,500
March.....	2,021	110	-	65.2	.334	.39	4,010
April.....	4,615	366	100	154	.790	.88	9,150
May.....	18,594	905	332	600	3.08	3.66	36,880
June.....	13,998	660	228	466	2.39	2.67	27,750
July.....	4,658	226	111	150	.769	.88	9,240
August.....	3,324	191	87	107	.549	.63	6,590
September.....	2,486	90	76	82.9	.425	.47	4,930
Water year 1940-41.....	58,469	905	-	160	.821	11.16	116,000

\* Winter discharge measurement made on this day.

a No gage-height record or stage-discharge relation affected by ice; discharge computed on basis of two discharge measurements, weather records, and records for other Salmon River stations.

h Computed from staff-gage readings.

## SALMON RIVER BASIN

Pahsimeroi River near May, Idaho

Location.- Staff gage, lat.  $44^{\circ}42'$ , long.  $114^{\circ}03'$ , in W $\frac{1}{2}$  sec. 25, T. 16 N., R. 20 E., a quarter of a mile downstream from old highway bridge on Challis-Salmon River highway, a quarter of a mile upstream from Salmon River, and 10 miles northwest of May.

Records available.- October 1929 to September 1941.

Average discharge.- 11 years (1930-41), 177 second-feet.

Extremes.- Maximum discharge observed during year, 258 second-feet Nov. 4, 6, 7; maximum gage height observed, 2.67 feet Oct. 1, 2; minimum discharge observed, 86 second-feet May 12, 13.

1930-41: Maximum discharge observed, 279 second-feet Dec. 10-14, 16, 17, 1929; minimum observed, 75 second-feet Apr. 28, 1934.

Remarks.- Records fair. Gage read once daily. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	251	256	239	230	221	239	234	115	164	173	157	175
2	253	253	241	223	221	241	234	110	159	164	157	177
3	256	253	239	218	221	241	232	108	188	175	155	179
4	248	258	241	216	221	241	232	110	176	168	153	182
5	246	256	246	218	221	246	228	108	159	164	151	184
6	a247	258	248	218	221	246	225	108	182	168	153	186
7	248	258	246	221	218	244	223	106	184	170	155	188
8	246	a256	244	223	218	244	218	92	195	166	155	191
9	246	a253	244	221	221	244	218	92	179	164	157	195
10	244	251	244	218	223	241	218	92	170	162	162	196
11	248	251	241	218	232	237	214	87	164	162	239	200
12	251	246	241	216	234	230	214	86	149	157	232	202
13	251	246	239	216	234	232	214	86	144	155	223	202
14	248	244	234	218	232	232	212	89	168	157	191	202
15	248	246	232	216	230	232	216	95	166	159	188	205
16	248	244	228	216	232	234	202	110	164	153	184	209
17	251	246	223	221	232	234	193	108	168	147	182	207
18	248	246	223	223	234	232	191	102	173	147	184	207
19	253	248	228	223	232	234	191	104	162	149	182	209
20	253	248	230	223	237	239	182	99	159	147	186	209
21	251	244	234	221	237	237	175	108	157	151	182	216
22	253	239	234	a221	237	239	168	106	155	157	179	216
23	a253	244	237	a222	239	241	164	108	157	153	182	216
24	a253	237	241	a223	239	241	157	108	155	149	179	214
25	a254	237	241	a224	237	239	153	117	155	151	179	214
26	a254	234	244	a225	237	237	144	128	157	155	179	214
27	a255	234	244	225	239	234	142	182	170	155	179	216
28	a255	234	244	225	239	234	140	157	195	153	182	216
29	a256	237	244	225	-	237	124	164	188	155	173	214
30	a256	237	244	225	-	239	119	157	184	155	173	216
31	256	-	239	223	-	237	-	155	-	157	173	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						7,780	256	244	251		15,430	
November.....						7,394	258	234	246		14,670	
December.....						7,397	248	223	239		14,670	
Calendar year 1940 .....						70,164	277	92	192		139,200	
January.....						6,855	230	216	221		13,600	
February.....						6,439	239	218	230		12,770	
March.....						7,378	246	230	238		14,630	
April.....						5,777	234	119	193		11,460	
May.....						3,497	182	86	113		6,940	
June.....						5,045	195	144	168		10,010	
July.....						4,898	175	147	158		9,720	
August.....						5,506	239	151	178		10,920	
September.....						6,059	216	175	202		12,020	
Water year 1940-41.....						74,025	258	86	203		146,800	

a No gage-height record; discharge interpolated.

## Lemhi River at Salmon, Idaho

Location.— Staff gage, lat. 45°10', long. 113°52'30", in SE¼ sec. 5, T. 21 N., R. 22 E., 40 feet upstream from highway bridge, 1,100 feet upstream from diversion gates of power canal, 1,320 feet downstream from Kirtly Creek, and 1 mile southeast of Salmon.

Records available.— August 1928 to September 1941.

Average discharge.— 13 years, 217 second-feet.

Extremes.— Maximum discharge observed during year, 1,350 second-feet June 8 (gage height, about 3.7 feet), from rating curve extended above 600 second-feet; minimum discharge observed, 35 second-feet May 12 (gage height, 1.16 feet).  
1928-41: Maximum discharge, 2,400 second-feet June 3, 1936 (gage height, 4.0 feet, from floodmarks, site and datum then in use), from rating curve extended above 1,200 second-feet; minimum observed, 14 second-feet July 22, 23, 1931, Aug. 30 to Sept. 3, 1937.

Remarks.— Records fair. Many diversions above station for irrigation. Idaho Power Co. (Formerly Salmon River Power & Light Co.) diverts water 1,100 feet downstream for power development.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

1.1	28	2.6	405
1.4	70	2.9	600
1.7	129	3.2	855
2.0	202	3.5	1,150
2.3	290	3.7	1,350

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	360	290	260	216	181	360	245	110	722	275	152	197
2	342	290	260	192	202	405	260	100	810	275	150	194
3	325	290	260	189	230	360	245	75	855	290	121	171
4	342	290	260	202	245	290	245	68	855	a275	102	150
5	342	275	260	216	230	260	230	53	855	260	98	162
6	342	290	245	230	230	260	230	53	855	245	77	169
7	325	290	260	230	230	260	216	54	855	230	68	162
8	a316	290	260	216	216	260	216	53	a1,350	216	67	174
9	308	290	245	202	202	260	216	48	a1,050	202	67	186
10	308	290	230	194	197	230	202	40	765	186	65	197
11	308	260	216	186	197	230	216	39	680	164	75	199
12	308	245	189	202	202	216	202	35	640	143	81	197
13	308	245	b180	174	216	216	202	40	600	145	90	199
14	308	230	b170	260	216	216	192	159	640	152	121	199
15	290	230	b180	290	202	230	189	169	640	164	106	216
16	275	275	b190	275	202	245	197	162	680	169	102	230
17	275	275	b200	260	230	245	192	192	680	157	96	230
18	275	260	b210	260	216	260	189	216	600	147	92	245
19	275	260	b220	245	197	260	184	202	562	166	112	245
20	275	260	230	230	197	245	184	194	492	192	108	260
21	275	275	230	230	202	230	156	171	460	179	110	260
22	290	260	245	216	216	230	176	184	382	162	123	275
23	290	245	245	216	216	230	164	197	342	145	140	290
24	290	230	245	216	216	216	147	308	308	138	192	325
25	290	245	245	216	216	216	147	325	290	131	197	325
26	290	260	245	202	216	216	145	525	260	127	199	325
27	290	260	230	202	230	230	147	a1,250	245	127	216	325
28	290	260	230	197	245	230	143	950	230	171	216	325
29	290	260	245	202	-	245	138	680	245	159	216	325
30	290	275	245	189	-	245	121	722	275	169	216	325
31	275	-	216	197	-	245	-	640	-	154	216	-
Month						Second-foot-days	Maximum	Minimum	Mean		Run-off in acre-feet	
October.....						9,367	360	275	302		18,580	
November.....						7,995	290	230	266		15,860	
December.....						7,146	260	170	231		14,170	
Calendar year 1940.....						78,600	586	18	215		155,900	
January.....						6,752	290	174	218		13,390	
February.....						5,995	245	181	214		11,890	
March.....						7,841	405	216	253		15,550	
April.....						6,766	260	121	192		11,440	
May.....						6,014	1,250	35	259		15,900	
June.....						18,223	1,350	230	607		36,140	
July.....						5,715	290	127	184		11,340	
August.....						3,881	216	65	126		7,900	
September.....						7,082	325	150	236		14,050	
Water year 1940-41 .....						93,677	1,350	35	257		186,200	

a No gage-height record; discharge interpolated or computed on basis of estimates of stage made by observer.

b Stage-discharge relation affected by ice.

## Middle Fork of Salmon River near Cape Horn, Idaho

Location.- Water-stage recorder, lat. 44°25', long. 115°18', in sec. 34, T. 13 N., R. 11 E., 1,100 feet downstream from Little Beaver Creek, half a mile downstream from confluence of Marsh and Beaver Creeks, and 1½ miles northwest of Cape Horn.

Drainage area.- 138 square miles.

Records available.- September 1928 to September 1941.

Average discharge.- 13 years, 197 second-feet.

Extremes.- Maximum discharge during year, 1,290 second-feet May 26 (gage height, 5.22 feet); minimum not determined, probably occurred during winter.  
1928-41: Maximum discharge, 2,340 second-feet June 9, 1933 (gage height, 6.26 feet), from rating curve extended above 1,900 second-feet; minimum recorded, 35 second-feet (estimated) Nov. 26-30, 1929, but may have been less during some winters.

Remarks.- Records good except those for period of no gage-height record, which are poor. No diversion above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1-19, May 13-19, Aug. 3 to Sept. 30)

2.4	68	3.1	223	4.0	565	4.9	1,065
2.6	103	3.4	319	4.3	715	5.2	1,290
2.8	145	3.7	433	4.6	880		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	113						119	589	715	292	130	117
2	174						130	589	663	269	127	123
3	174						130	663	663	256	121	119
4	143						125	658	663	244	117	115
5	152						127	613	658	247	115	113
6	121						123	533	613	226	111	111
7	117						123	497	689	215	109	107
8	115						127	524	770	206	125	105
9	111						134	479	658	201	150	103
10	107						138	497	589	195	125	103
11	105						132	565	565	192	162	107
12	103						138	770	565	187	195	123
13	101						152	970	569	185	145	123
14	99						159	940	663	185	130	115
15	98						174	825	565	177	123	132
16	96	a100	a80	a75	a70	a75	162	770	528	172	123	121
17	96						155	770	493	169	125	113
18	94						147	770	565	169	127	107
19	94						143	689	565	169	198	123
20							152	663	479	159	182	119
21	a115						159	689	425	152	157	111
22							169	770	393	145	155	107
23							195	880	374	143	152	103
24							223	970	369	141	143	101
25							250	970	344	138	138	101
26							292	1,210	326	145	141	99
27							359	1,100	323	150	134	99
28							429	970	319	150	130	98
29							484	825	309	145	125	98
30							556	770	292	138	123	96
31		-			-	117	-	798	-	132	119	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	3,573	174	-	115	0.833	0.96	7,090
November.....	3,000	-	-	100	.725	.81	5,950
December.....	2,480	-	-	80	.580	.67	4,920
Calendar year 1940.....	81,673	1,420	-	223	1.62	22.00	161,990
January.....	2,325	-	-	75	.543	.63	4,610
February.....	1,960	-	-	70	.507	.53	3,890
March.....	2,367	117	-	76.4	.554	.64	4,690
April.....	5,906	556	119	197	1.43	1.60	11,710
May.....	23,306	1,210	479	752	5.45	6.28	46,230
June.....	15,592	770	292	525	3.79	4.23	31,100
July.....	5,694	292	132	184	1.33	1.53	11,290
August.....	4,257	198	109	137	.993	1.14	8,440
September.....	3,512	132	96	110	.797	.89	6,570
Water year 1940-41.....	73,862	1,210	-	202	1.46	19.91	146,490

a No gage-height record; discharge computed on basis of records for other Salmon River stations.

## Bear Valley Creek near Cape Horn, Idaho

Location.- Water-stage recorder in about sec. 31, T. 13 N., R. 10 E., 250 feet downstream from Fir Creek, 5 miles upstream from mouth, and 7 miles northwest of Cape Horn.

Drainage area.- 180 square miles.

Records available.- September 1921 to September 1928 (fragmentary), October 1928 to September 1941.

Average discharge.- 13 years (1928-41), 239 second-feet.

Extremes.- Maximum discharge during year, 1,910 second-feet May 27 (gage height, 4.23 feet); minimum not determined, probably occurred during winter.  
1921-41: Maximum discharge, 3,450 second-feet June 9, 1933 (gage height, 5.49 feet), from rating curve extended above 2,000 second-feet; minimum recorded, 28 second-feet Nov. 11, 1931.

Remarks.- Records good except those for periods of no gage-height record, which are poor. No regulation or diversion above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

1.3	92	2.5	555	3.7	1,410
1.6	161	2.8	740	4.0	1,670
1.9	263	3.1	945	4.3	1,960
2.2	395	3.4	1,170		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153						176	760	1,210	357	156	140
2	182						191	720	962	326	151	145
3	259						194	826	945	304	143	161
4	222						179	910	1,020	288	138	153
5	182						176	826	910	275	133	148
6	161						161	734	847	259	128	145
7	161						158	675	945	248	126	138
8	145						164	727	1,250	233	126	135
9	143						179	760	945	222	145	135
10	138						188	772	786	218	164	133
11	133						179	910	740	211	153	133
12	130						173	1,130	734	211	244	153
13	128						194	1,410	734	208	194	158
14	126						201	1,410	826	205	161	145
15	121						229	1,250	714	201	151	164
16	119	a120	a100	a90	a85	a95	211	1,100	645	194	194	173
17	117						198	1,060	609	191	156	153
18	112						185	1,060	766	188	179	140
19	108						182	875	910	188	252	145
20	104						188	847	779	182	252	161
21	96						208	875	579	173	218	148
22	96						222	945	516	167	185	140
23	94						263	1,020	a470	161	167	135
24	94						322	1,210	a440	158	161	133
25	188						376	1,410	a420	156	156	133
26	185						430	1,490	a400	158	158	130
27	143						494	1,810	390	181	156	128
28	130						585	1,450	390	198	148	128
29	121						645	1,170	386	198	148	126
30	110						720	1,130	372	173	151	126
31	114	-					-	1,250	-	158	146	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	4,305	259	94	139	0.772	0.89	8,540
November.....	3,600	-	-	120	.667	.74	7,140
December.....	3,100	-	-	100	.556	.64	6,150
Calendar year 1940.....	98,164	1,750	-	268	1.49	20.29	194,700
January.....	2,790	-	-	90	.500	.58	5,530
February.....	2,380	-	-	85	.472	.49	4,720
March.....	2,945	-	-	95	.528	.61	5,840
April.....	7,971	720	158	266	1.48	1.65	15,810
May.....	32,522	1,810	720	1,049	5.83	6.72	64,510
June.....	21,660	1,250	372	722	4.01	4.47	42,960
July.....	6,600	357	156	213	1.18	1.36	13,090
August.....	5,139	252	126	166	.922	1.06	10,190
September.....	4,285	173	126	143	.794	.89	8,500
Water year 1940-41.....	97,297	1,810	-	267	1.48	20.10	193,000

a No gage-height record; discharge computed on basis of records for other Salmon River stations.

## SALMON RIVER BASIN

South Fork of Salmon River near Knox, Idaho

Location.- Staff gage, lat. 44°39', long. 115°42', in NW¼ sec. 11, T. 15 N., R. 6 E., an eighth of a mile below Curtis Creek, three-quarters of a mile above Warm Lake Creek, 1¼ miles southwest of Knox, and 21 miles northeast of Cascade.

Drainage area.- 92 square miles.

Records available.- September 1928 to September 1941.

Average discharge.- 13 years, 119 second-feet.

Extremes.- Maximum daily discharge during year, 735 second-feet May 13, 26; minimum discharge not determined, probably occurred during period of ice effect.  
1928-41: Maximum discharge observed, 1,560 second-feet June 9, 1933 (gage height, 4.69 feet), from rating curve extended above 1,000 second-feet; minimum observed, 16 second-feet Feb. 17, Aug. 19, 20, 1931, but may have been less during a winter period.

Remarks.- Records fair. Gage read about thrice weekly. No diversion above station.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	67	51				154	359	575	165	63	53
2	80	67	52				170	338	525	157	61	52
3	109	68	52			b42	160	380	550	149	60	51
4	72	70	53				150	400	575	143	59	51
5	64	56	52				140	370	530	136	57	51
6	58	60	52			41	130	350	500	130	55	50
7	52	67	51			42	125	338	525	123	53	49
8	50	66	50			42	130	348	535	116	53	47
9	48	64	b48			42	135	359	425	108	53	47
10	46	b60				41	150	359	425	101	61	46
11	44	b55				41	135	484	425	100	58	46
12	43	b45				44	125	610	440	98	73	46
13	42	b40				48	121	735	460	97	66	46
14	41	b50	b35			45	122	680	380	96	67	46
15	41			b42	b40	55	122	625	346	94	56	50
16	41					59	122	575	311	92	59	53
17	42	b60				62	123	525	277	90	61	52
18	43					64	117	500	425	83	64	51
19	44					64	109	475	460	83	67	56
20	45					64	121	460	360	83	70	59
21	46		b50			66	127	d470	292	83	63	52
22	46					67	133	500	261	83	56	48
23	47					68	139	d560	230	80	56	47
24	48	b50				70	156	625	222	76	56	46
25	90					75	172	700	213	76	56	46
26	d80					80	d188	735	205	75	56	46
27	75					92	205	717	205	75	54	47
28	70					103	237	698	199	80	51	48
29	68	b55	b45			114	278	680	193	72	52	49
30	66					126	318	652	179	67	52	50
31	67					140		625		65	52	-

  

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	1,763	109	41	56.9	0.618	0.71	3,500
November.....	1,710	70	40	57.0	.620	.69	3,390
December.....	1,411	-	-	45.5	.495	.57	2,800
Calendar year 1940.....	49,165	800	-	134	1.46	19.89	97,510
January.....	1,302	-	-	42.0	.457	.53	2,580
February.....	1,120	-	-	40.0	.435	.46	2,220
March.....	1,933	140	-	63.3	.688	.79	3,990
April.....	4,614	318	109	154	1.67	1.86	9,150
May.....	16,232	735	338	524	5.70	6.57	32,800
June.....	11,328	625	179	378	4.11	4.59	22,470
July.....	3,076	165	65	99.2	1.08	1.24	6,100
August.....	1,810	73	51	58.4	.635	.73	3,590
September.....	1,479	58	46	48.3	.536	.60	2,930
Water year 1940-41.....	47,808	735	-	131	1.42	19.33	94,820

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge interpolated or computed on basis of records for other Salmon River stations.

Note.- Gage read about thrice weekly; discharge for intervening days interpolated or computed on basis of weather records and records for station near Warren, and for Johnson Creek at Yellow Pine.

## South Fork of Salmon River near Warren, Idaho

Location.— Staff gage, lat. 45°09', long. 115°35', in SE¼ sec. 15, T. 21 N., R. 7 E., 500 feet downstream from Elk Creek, 900 feet north of Elk Creek power plant, and 8 miles southeast of Warren.

Drainage area.— 1,160 square miles.

Records available.— July 1391 to September 1941.

Average discharge.— 10 years, 1,568 second-feet.

Extremes.— Maximum discharge observed during year, 9,330 second-feet May 13 (gage height, 9.60 feet); minimum observed, 280 second-feet Dec. 13 (gage height, 2.72 feet).

1931-41: Maximum discharge observed, 20,000 second-feet June 9, 1933 (gage height, 13.16 feet), from rating curve extended above 8,000 second-feet; minimum observed, 180 second-feet Dec. 27, 1939 (gage height, 2.26 feet).

Remarks.— Records good. Gage read twice daily. No appreciable diversions or regulation.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

2.7	280	4.4	1,240	6.4	3,420	8.4	6,870
3.0	380	4.8	1,600	6.8	4,020	8.8	7,660
3.3	505	5.2	1,990	7.2	4,690	9.2	8,490
3.6	660	5.6	2,420	7.6	5,380	9.6	9,330
4.0	920	6.0	2,890	8.0	6,110		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	780	815	660	482	505	720	1,420	4,180	5,560	2,420	815	605
2	850	550	660	362	505	780	1,680	4,340	5,020	2,200	780	605
3	1,240	885	660	390	482	720	1,680	4,680	5,390	2,200	780	632
4	1,080	815	660	460	460	660	1,510	5,020	5,380	2,090	720	632
5	885	690	632	580	420	660	1,510	4,850	5,020	1,990	690	632
6	815	750	632	580	440	632	1,420	4,180	4,850	1,790	660	605
7	750	780	605	580	505	605	1,420	3,560	5,200	1,690	632	605
8	720	850	605	555	530	605	1,420	3,560	5,560	1,600	632	605
9	690	815	605	505	530	632	1,420	3,420	5,020	1,510	660	580
10	660	750	482	482	505	632	1,600	3,420	4,340	1,420	780	580
11	632	660	420	440	530	605	1,510	4,340	4,340	1,420	720	555
12	632	555	380	420	530	605	1,510	6,300	4,340	1,530	850	555
13	605	460	310	440	505	660	1,420	9,330	4,680	1,240	780	580
14	580	580	328	482	530	555	1,510	8,490	4,850	1,240	690	580
15	580	632	400	530	460	580	1,600	6,870	4,340	1,240	660	605
16	555	660	482	530	440	632	1,510	6,490	4,180	1,160	680	660
17	555	690	555	450	460	680	1,420	4,490	3,560	1,160	632	605
18	530	750	780	530	482	720	1,330	6,300	4,180	1,080	660	580
19	530	660	815	555	580	780	1,240	5,380	6,110	1,160	720	605
20	505	632	690	555	530	780	1,330	5,020	5,020	1,080	720	660
21	505	660	660	530	505	750	1,330	5,200	4,020	1,000	750	605
22	505	605	632	530	505	750	1,330	5,740	3,710	1,000	690	580
23	505	505	605	505	530	750	1,510	6,870	3,420	920	690	580
24	505	632	605	505	530	750	1,790	7,660	3,150	885	720	555
25	1,080	632	605	505	530	750	1,990	8,060	2,690	850	690	555
26	1,000	580	580	530	482	815	2,090	7,460	2,770	885	690	555
27	850	580	605	482	505	920	2,420	7,460	2,650	920	720	555
28	780	605	605	400	555	1,000	2,770	6,300	2,650	920	660	530
29	720	720	505	380	-	1,160	3,020	5,560	2,650	1,000	632	530
30	720	-	530	400	-	1,240	3,560	5,560	2,420	885	632	530
31	750	-	555	460	-	1,330	-	5,920	-	850	632	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	22,094	1,240	505	713	0.615	0.71	43,820
November.....	22,518	885	460	684	.580	.66	40,700
December.....	17,648	815	310	576	.497	.57	35,400
Calendar year 1940.....	604,971	9,770	295	1,653	1.42	19.39	1,200,000
January.....	15,205	580	362	490	.422	.49	30,160
February.....	14,071	580	420	503	.434	.45	27,910
March.....	23,438	1,330	555	756	.652	.75	46,490
April.....	51,290	3,560	1,240	1,710	1.47	1.64	101,700
May.....	178,000	9,330	3,420	5,742	4.95	5.71	353,100
June.....	127,860	6,110	2,420	4,242	3.56	4.08	252,400
July.....	41,135	2,420	850	1,327	1.14	1.31	81,590
August.....	21,747	850	632	702	.605	.70	43,130
September.....	17,641	660	530	588	.507	.57	34,990
Water year 1940-41.....	550,247	9,330	310	1,508	1.30	17.64	1,091,000

## SALMON RIVER BASIN

East Fork of South Fork of Salmon River at Stibnite, Idaho

Location.- Water-stage recorder, lat. 44°54', long. 115°19', in about sec. 14, T. 18 N., R. 9 E., 30 feet downstream from Meadow Creek, half a mile northeast of Stibnite post office, and 10½ miles upstream from Johnson Creek.

Drainage area.- 19.5 square miles.

Records available.- June 1928 to September 1941.

Average discharge.- 13 years, 23.2 second-feet.

Extremes.- Maximum discharge during year, 139 second-feet May 26 (gage height, 3.39 feet); minimum not determined.

1928-41: Maximum discharge recorded, 369 second-feet June 14, 1933 (gage height, 4.49 feet); minimum discharge, 2 second-feet Oct. 29, 1936 (gage height, 1.71 feet).

Remarks.- Records good except those for Mar. 1-30, Aug. 18 to Sept. 30, which are fair, and those for Nov. 10 to Feb. 28, which are poor. Slight regulation by reservoir on South Fork of Meadow Creek (capacity, about 700 acre-feet) and by a diversion from Meadow Creek of about a third of a second-foot for transporting mine tailings.

Cooperation.- Gage-height record furnished by Bradley Mining Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	20					14	56	85	43	14	
2	26	18					17	58	82	39	14	
3	19	12					15	60	82	38	15	
4	15	11					15	63	82	41	15	
5	14	e10					16	60	78	36	14	
6	14	12				e7	14	54	78	32	14	
7	16	14					14	51	85	34	13	
8	14	13					15	55	85	33	14	
9	13	12					16	50	80	32	18	
10	13	e11					16	53	78	29	16	
11	14	e10					19	64	78	26	16	
12	12						21	89	77	23	18	
13	13					h7	24	125	79	23	15	
14	14					e7	21	107	78	21	14	
15	20					e7	18	93	68	20	15	
16	12		*e7	e6	e6	e7	15	88	64	20	14	e12
17	11					e7	14	90	62	21	15	
18	11					h7	14	90	68	20		
19	12					e7	14	84	72	19		
20	14					e7	14	82	63	19		
21	18	e8				e7	14	86	56	18		
22	e14					h7	16	94	54	18		
23	11					e7	19	110	56	18		
24	11					h7	21	127	53	18	e14	
25	16					e8	24	130	46	18		
26	15					e8	26	128	49	17		
27	13					e9	30	114	48	17		
28	13					h10	36	97	51	18		
29	14				-	e11	43	92	49	16		
30	16				-	e12	51	92	44	15		
31	17	-			-	13	-	89	-	14		-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						451	26	11	14.5	895		
November.....						295	20	-	9.8	585		
December.....						217	-	-	7.0	430		
Calendar year 1940.....						8,822	155	-	24.1	17,490		
January.....						186	-	-	6.0	369		
February.....						168	-	-	6.0	333		
March.....						239	13	-	7.7	474		
April.....						606	51	14	20.2	1,200		
May.....						2,631	130	50	84.9	5,220		
June.....						2,030	85	44	67.7	4,030		
July.....						756	43	14	24.4	1,500		
August.....						450	-	-	14.5	893		
September.....						360	-	-	12.0	714		
Water year 1940-41.....						8,389	130	-	23.0	16,640		

\* Winter discharge measurement made on this day.

e Stage-discharge relation affected by ice or gage-height record missing or not representative of mean stage; discharge interpolated or computed on basis of one discharge measurement, weather records, and records for other South Fork Salmon River stations.

h Computed from staff-gage readings.



## East Fork of South Fork of Salmon River near Stibnite, Idaho

Location.- Staff gage, lat. 44°56', long. 115°20', in sec. 34, T. 19 N., R. 9 E., 200 feet downstream from Sugar Creek, 3 miles north of Stibnite post office, and 8½ miles upstream from Johnson Creek.

Drainage area.- 42.5 square miles.

Records available.- June 1928 to September 1941 (discontinued).

Average discharge.- 13 years, 50.4 second-feet.

Extremes.- Maximum and minimum discharges during year not determined.  
1929-40: Maximum discharge observed, 783 second-feet June 15, 1933 (gage height, 3.51 feet), from rating curve extended above 500 second-feet; minimum observed, 10 second-feet Apr. 7, 1929, and Apr. 7, 1936, but may have been less during periods of ice effect.

Remarks.- Records fair except those for November to February, which are poor. Some regulation by Bradley Mining Co.'s power plant above station and auxiliary storage reservoir on South Fork of Meadow Creek (capacity, about 700 acre-feet). Gage read once daily.

Cooperation.- Gage-height record furnished by Bradley Mining Co.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	19		-	18	19	28	-	-			
2	-	-		-	17	19	-	-	-			
3	-	-		-	-	-	-	106	-			
4	-	-		-	-	-	-	-	-			
5	-	18		-	-	-	30	-	-			
6	21	-		-	-	-	30	-	-			
7	-	-		-	-	-	-	-	-			
8	-	18		-	17	20	-	-	-			
9	-	-		-	17	20	-	-	-			
10	20	-		-	-	-	-	-	-			
11	-	-		-	-	-	-	-	-			
12	-	-		-	-	-	-	-	-			
13	20	-		19	-	-	-	-	-		†31	
14	-	-		-	-	-	-	-	-			
15	-	-		-	17	20	-	-	-			
16	21	-		-	17	21	-	-	-			
17	-	-		-	-	-	-	-	-			
18	-	-		18	-	-	33	-	-			
19	19	-		18	-	-	30	-	-			
20	-	-		-	-	-	-	-	-			
21	-	-		-	-	-	-	-	-			
22	21	-		-	18	22	-	-	-			
23	21	-		-	19	23	-	214	-			
24	21	-		-	-	-	-	-	-			
25	-	-		16	-	-	-	-	-	†31		
26	26	-		17	-	-	60	-	-			
27	-	-		-	-	-	82	-	-			
28	-	-		-	19	-	-	-	-			
29	20	-		-	-	26	-	-	92			
30	-	-		-	-	27	-	-	88			
31	-	-		19	-	27	-	-	-			

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October.....	682	-	-	e22	0.518	0.60	1,350
November.....	570	-	-	e19	.447	.50	1,130
December.....	527	-	-	e17	.400	.46	1,050
Calendar year 1940.....	16,401	365	-	50.3	1.18	16.09	36,500
January.....	527	-	-	e17	.400	.46	1,050
February.....	476	-	-	e17	.400	.42	944
March.....	682	-	-	e22	.518	.60	1,350
April.....	1,320	-	-	e44	1.04	1.16	2,620
May.....	4,960	-	-	e160	3.76	4.34	9,840
June.....	3,750	-	-	e125	2.94	3.28	7,440
July.....	1,550	-	-	e50	1.18	1.36	3,070
August.....	950	-	-	e30	.706	.81	1,840
September.....	510	-	-	e27	.635	.71	1,610
Water year 1940-41.....	16,784	-	-	46.0	1.08	14.70	33,290

† Result of discharge measurement.

e Discharge computed on basis of occasional figures of daily discharge, weather records and records for nearby stations.

## East Fork of South Fork of Salmon River near Yellow Pine, Idaho

Location.- Water-stage recorder, lat. 44°58', long. 115°27', in NE¼ sec. 27, T. 19 N., R. 8 E., 200 feet upstream from Forest Service highway bridge, 1½ miles east of Yellow Pine, 1½ miles upstream from Quartz Creek, 2 miles downstream from Profile Creek, and 2.8 miles upstream from Johnson Creek.

Drainage area.- 104 square miles.

Records available.- August 1928 to September 1941.

Average discharge.- 13 years, 135 second-feet.

Extremes.- Maximum discharge during year, 796 second-feet May 13 (gage height, 3.54 feet); minimum not determined.

1928-41: Maximum discharge, 2,050 second-feet June 14, 1933 (gage height, 5.26 feet), from rating curve extended above 1,100 second-feet; minimum discharge recorded, 25 second-feet Oct. 23, 1935, but may have been less during periods of ice effect.

Remarks.-Records good except those for Nov. 11 to Apr. 16, which are fair. Slight regulation by Bradley Mining Co.'s power plant on this stream and small reservoir on South Fork of Meadow Creek.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	62					a50	302	425	238	97	77
2	90	62					a90	305	408	229	94	77
3	105	62					a90	315	408	225	90	77
4	94	62					a85	315	408	214	88	78
5	88	65					a80	302	388	202	88	77
6	83	68					a80	266	373	190	87	74
7	83	68					a80	248	417	185	83	74
8	82	70					a80	244	438	179	83	77
9	80	67					a85	252	412	173	99	76
10	77	65					a90	248	388	168	76	74
11	76	b55					a90	315	381	160	87	72
12	72	b45					a95	491	394	151	96	74
13	71	b40					a110	736	392	144	87	74
14	71	b50					a105	a650	388	141	83	72
15	71	b55					a100	a550	351	136	82	76
16	71		a50	a50	a50	a60	a100	a540	329	132	83	74
17	68						b97	a540	312	127	80	72
18	65						87	a520	351	127	80	71
19	64						83	a440	392	124	80	82
20	63						85	a420	354	120	88	77
21	63						85	a450	326	114	90	76
22	62						87	a500	302	112	87	a73
23	62	a55					97	822	292	109	88	a70
24	65						116	898	279	107	87	a68
25	87						132	680	266	107	82	a66
26	71						154	650	254	105	85	a64
27	70						173	588	254	105	85	a63
28	67						199	496	257	109	80	b63
29	65						238	450	263	103	80	a65
30	63						279	442	244	97	80	a65
31	62						-	446	-	96	78	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	2,285	105	62	73.7	0.709	0.82	4,530
November.....	1,721	70	-	57.4	.552	.62	3,410
December.....	1,550	-	-	50.0	.451	.55	3,070
Calendar year 1940.....	50,378	831	-	138	1.33	16.01	99,910
January.....	1,550	-	-	50.0	.481	.55	3,070
February.....	1,400	-	-	50.0	.451	.50	2,780
March.....	1,580	-	-	60.0	.577	.67	3,690
April.....	3,552	279	80	112	1.08	1.20	6,650
May.....	14,001	736	232	452	4.35	5.02	27,770
June.....	10,436	438	244	348	3.35	3.74	20,700
July.....	4,527	238	96	146	1.40	1.61	8,980
August.....	2,653	99	76	85.6	.823	.95	5,260
September.....	2,174	82	63	72.5	.697	.78	4,310
Water year 1940-41.....	47,509	736	-	130	1.25	17.01	94,220

a No gage-height record; discharge computed on basis of weather records and records for nearby stations.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

## Johnson Creek at Yellow Pine, Idaho

Location.— Water-stage recorder, lat. 44°58', long. 115°30', in NE¼ sec. 29, T. 19 N., R. 8 E., 700 feet upstream from mouth and a quarter of a mile southwest of Yellow Pine post office.

Drainage area.— 213 square miles.

Records available.— August 1928 to September 1941.

Average discharge.— 13 years, 284 second-feet.

Extremes.— Maximum discharge during year, 2,520 second-feet May 13 (gage height, 5.14 feet); minimum, 39 second-feet sometime during period Dec. 12-14 (gage height, 0.89 foot, from recorded range in stage).

1928-41: Maximum discharge, 5,150 second-feet June 9, 1933 (gage height, 7.62 feet), from rating curve extended above 2,800 second-feet; minimum, 22 second-feet Nov. 30, 1933; minimum gage height, 0.70 foot Nov. 30, 1937.

Remarks.— Records good. During late fall of 1936, the Bureau of Reclamation cut trans-mountain channel to divert a small flow from a tributary of Johnson Creek to Deadwood River Basin to supplement storage in Deadwood Reservoir. Measurement of May 24 indicated flow in diversion of 32.9 second-feet; July 1, 6.6 second-feet; Aug. 14, 1.6 second-feet.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.0	51	2.4	453	4.4	1,900
1.2	90	2.6	656	4.6	2,170
1.4	118	3.2	906	5.2	2,580
1.7	196	3.6	1,175		
2.0	296	4.0	1,470		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	136	114	80	87	102	227	970	1,210	418	130	96
2	169	144	116	75	93	100	264	970	1,100	379	125	96
3	212	144	118	74	84	94	260	1,100	1,100	367	116	108
4	179	125	116	89	84	93	247	1,140	1,140	354	112	104
5	162	110	114	96	82	96	247	1,040	1,040	318	108	102
6	144	134	114	98	87	91	234	905	970	296	104	98
7	134	139	110	96	91	91	230	872	1,040	274	102	96
8	130	132	108	93	89	93	240	905	1,210	260	100	94
9	123	134	106	91	91	94	260	872	1,000	247	123	93
10	116	120	84	91	91	93	271	970	905	237	134	91
11	112	112	70	89	91	96	a269	1,210	905	227	120	89
12	110	87	a60	87	91	93	a268	1,630	938	221	169	91
13	106	82	a55	94	85	102	a266	2,270	970	212	139	100
14	102	108	a70	94	87	87	a265	1,690	970	202	116	98
15	100	114	77	93	77	100	a263	1,690	840	190	108	110
16	96	116	77	91	80	100	a262	1,470	768	182	112	120
17	94	125	87	91	84	104	260	1,470	714	179	114	110
18	93	127	100	98	89	116	252	1,430	905	179	149	100
19	89	110	106	95	91	116	240	1,180	1,070	187	146	112
20	85	112	b106	93	87	118	250	1,140	872	170	144	125
21	85	120	106	93	85	112	260	1,280	709	162	132	112
22	87	108	106	91	85	118	271	1,430	643	164	125	104
23	87	96	104	91	85	120	323	1,690	590	146	120	100
24	91	110	104	89	87	116	371	1,760	545	141	120	96
25	182	110	102	91	86	123	405	1,670	510	136	116	94
26	173	104	100	89	78	134	458	1,710	482	136	120	93
27	154	104	102	78	87	149	525	1,690	472	144	118	a91
28	141	108	94	78	91	164	626	1,320	477	164	110	89
29	130	120	87	78	-	182	726	1,210	468	162	106	89
30	127	112	98	82	-	190	840	1,240	452	144	106	87
31	132	-	98	87	-	202	-	1,320	-	154	102	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	3,867	212	85	125	0.587	0.68	7,670
November.....	3,505	144	82	117	.549	.61	6,950
December.....	3,009	118	55	97.1	.456	.53	5,970
Calendar year 1940.....	118,603	2,520	51	324	1.52	20.71	235,200
January.....	2,748	98	74	88.6	.416	.48	5,450
February.....	2,424	93	77	86.6	.407	.42	4,810
March.....	3,569	202	87	116	.545	.63	7,120
April.....	9,681	840	227	329	1.54	1.72	19,600
May.....	41,144	2,270	872	1,327	6.23	7.18	81,610
June.....	24,965	1,210	432	835	3.91	4.36	49,560
July.....	6,699	418	134	216	1.01	1.16	13,290
August.....	3,756	159	100	121	.668	.65	7,410
September.....	2,988	126	87	99.6	.468	.52	5,930
Water year 1940-41.....	108,575	2,270	55	297	1.39	18.94	215,400

a No gage-height record; discharge interpolated or computed on basis of records for other stations in Salmon River Basin.

b Stage-discharge relation affected by ice.

## Boulder Creek near Tamarack, Idaho

Location.- Water-stage recorder, lat. 45°05', long. 116°27', in SW $\frac{1}{4}$  sec. 10, T. 20 N., R. 1 W., 350 feet upstream from trans-mountain diversion to Weiser River Basin, and 8 miles northwest of Tamarack.

Drainage area.- 6.5 square miles (revised). Figures of discharge per square mile and run-off in inches for water year 1939-40, published in Water-Supply Paper 903, are based on original drainage area determination of 5.9 square miles.

Records available.- April 1938 to September 1941 (incomplete).

Extremes.- Maximum discharge during year, 155 second-feet May 13; maximum gage height, 2.40 feet May 24; minimum discharge not determined, probably occurred during winter. 1938-41: Maximum discharge, 226 second-feet May 27, 1938 (gage height, 2.95 feet), from rating curve extended above 180 second-feet; minimum not determined.

Remarks.- Records good. No regulation. Small diversion to Weiser River Basin about 350 feet below station.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	3.8					-	89	41	11	3.2	2.1
2	5.3	4.5					-	87	39	10	3.2	3.0
3	5.0	4.1					-	101	40	10	3.0	3.2
4	4.5	3.6					-	96	36	9.0	3.0	3.0
5	3.6	3.4					-	85	33	8.3	2.8	2.6
6	3.2	3.6					-	70	32	8.0	2.8	2.4
7	2.8	4.1					-	59	36	7.3	2.6	2.3
8	2.6	4.1					-	58	36	7.0	2.6	2.3
9	2.4	4.1					-	57	33	6.4	2.6	2.1
10	2.3	-	11.8				-	65	31	6.4	2.6	2.1
11	2.3	-					12	82	30	5.9	2.6	2.1
12	2.1	-					13	113	28	5.9	4.1	2.3
13	2.1	-					15	137	26	5.9	3.2	2.1
14	2.0	-					17	113	25	5.6	2.8	2.1
15	2.0	-					18	94	23	5.3	2.4	2.4
16	2.0	-					18	81	22	5.0	2.3	2.1
17	1.8	-					18	75	20	4.7	2.1	2.1
18	1.8	-					18	66	22	4.5	2.1	2.6
19	1.7	-					20	59	23	4.5	2.1	3.6
20	1.7	-					20	57	20	4.3	2.3	3.0
21	1.7	-					21	58	18	4.1	2.4	2.6
22	1.7	-					20	62	16	3.8	2.4	2.4
23	1.7	-					23	66	15	3.8	2.3	2.1
24	2.6	-					26	75	15	3.6	2.3	2.0
25	5.3	-					32	73	14	3.6	2.4	2.0
26	3.8	-					38	67	12	3.6	2.6	2.0
27	3.4	-					47	59	13	4.3	2.8	2.0
28	3.2	-					57	50	13	4.5	2.3	2.0
29	3.2	-					66	47	13	4.1	2.1	2.0
30	3.4	-					78	44	12	3.6	2.4	1.7
31	3.4	-					-	44	-	3.4	2.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	87.8	5.3	1.7	2.83	0.435	0.50	174
November 1-9.....	35.3	4.5	3.4	3.92	.603	.20	70
December.....	-	-	-	-	-	-	-
Calendar year 1940.....	-	-	-	-	-	-	-
January.....	-	-	-	-	-	-	-
February.....	-	-	-	-	-	-	-
March.....	-	-	-	-	-	-	-
April 11-30.....	577	78	12	28.8	4.43	3.30	1,140
May.....	2,289	137	44	75.6	11.4	13.14	4,540
June.....	732	41	12	24.6	3.78	4.22	1,470
July.....	177.4	11	3.4	5.72	.880	1.01	352
August.....	80.7	4.1	2.1	2.60	.400	.46	160
September.....	70.3	3.6	1.7	2.34	.360	.40	139
Water year 1940-41.....	-	-	-	-	-	-	-

† Result of discharge measurement.

a No gage-height record; discharge interpolated.

## Grande Ronde River at La Grande, Oreg.

Location.-- Water-stage recorder, lat. 45°21', long. 118°09', in sec. 35, T. 2 S., R. 37 E., 2½ miles northwest of La Grande and 4 miles downstream from Fivepoint Creek.  
Datum of gage is 2,831.25 feet above mean sea level, datum of 1929.

Drainage area.-- 678 square miles.

Records available.-- February 1918 to June 1923, October 1925 to September 1941.  
November 1903 to September 1915, at Hilgard, 4 miles upstream.

Average discharge.---27 years (1906-9, 1910-11, 1912-15, 1918-20, 1921-22, 1925-41), 339 second-feet.

Extremes.-- Maximum discharge during year, 2,540 second-feet June 7 (gage height, 5.36 feet); minimum, 31 second-feet Oct. 19, 20 (gage height, 1.58 feet).

1903-15, 1918-23, 1925-41: Maximum discharge, 8,680 second-feet Mar. 18, 1932 (gage height, 8.90 feet); minimum, 3.9 second-feet Aug. 26, 1940 (gage height, 1.23 feet).

Remarks.-- Records fair. Some discharge measurements made at cable 3 miles above recorder. Small diversions above station for irrigation.

Rating table, water year 1940-41, except periods of ice effect and of backwater from debris (gage height, in feet, and discharge, in second-feet)

1.6	33	2.4	225	3.6	590
1.8	57	2.7	355	4.0	1,200
2.0	95	3.0	510	4.5	1,620
2.2	152	3.3	690	5.0	2,130

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	64	672	72	120	552	528	576	552	494	76	54
2	50	72	570	b65	115	722	582	976	606	499	71	62
3	89	84	499	b115	102	755	642	925	807	710	89	102
4	78	74	494	b145	102	824	594	834	729	899	86	118
5	67	66	494	b168	100	618	568	761	648	648	62	93
6	56	72	510	b155	118	630	499	710	636	672	59	80
7	49	69	440	b138	136	594	460	642	2,020	953	57	91
8	44	78	375	b110	136	612	430	678	2,220	666	54	93
9	42	87	342	b90	133	648	440	618	1,740	540	54	82
10	40	87	245	b66	162	570	494	600	1,400	450	50	74
11	38	84	210	b65	162	522	516	612	1,140	385	50	72
12	37	80	159	b69	195	472	482	660	976	328	59	71
13	36	67	b149	b70	176	395	460	755	953	288	59	74
14	35	b56	b144	b68	162	346	440	672	827	245	49	74
15	35	b80	b154	b80	139	342	435	576	904	217	52	72
16	34	b84	b161	b78	126	332	425	522	742	195	47	74
17	33	b86	b173	b76	133	357	405	630	748	175	43	69
18	32	123	b186	b74	130	420	375	748	1,130	152	40	71
19	31	110	b170	b77	139	415	346	672	1,290	142	40	67
20	31	142	b160	82	139	395	324	612	1,420	126	42	82
21	32	142	b170	94	142	365	310	570	1,180	115	43	76
22	32	108	*184	89	149	355	301	522	968	102	38	71
23	33	84	159	95	166	342	292	482	800	95	43	67
24	33	108	152	*108	245	306	346	460	742	91	45	64
25	37	102	146	130	241	301	395	435	534	84	45	60
26	48	*95	130	206	206	310	435	375	716	80	54	57
27	64	120	146	159	225	328	510	346	630	95	69	54
28	57	380	146	126	296	360	528	395	636	123	66	53
29	54	1,200	118	112	-	405	552	445	630	120	54	52
30	54	1,050	133	108	-	466	600	410	562	100	57	50
31	59	-	120	126	-	499	-	466	-	84	64	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,402	89	31	45.2	2,780
November.....	5,054	1,200	56	168	10,020
December.....	7,910	672	118	255	15,690
Calendar year 1940 .....	85,889	1,640	4.5	235	170,400
January.....	3,203	206	65	103	6,350
February.....	4,395	296	100	157	8,720
March.....	14,338	755	301	463	28,440
April.....	13,704	642	292	457	27,180
May.....	19,005	976	346	613	37,700
June.....	29,176	2,220	552	973	57,870
July.....	9,841	953	80	317	19,520
August.....	1,677	76	38	54.1	3,330
September.....	2,199	118	50	73.3	4,360
Water year 1940-41.....	111,904	2,220	31	307	222,000

Peak discharge.-- Nov. 29 (8 p.m.) 1,790 sec.-ft.; June 7 (6 p.m.) 2,540 sec.-ft.; July 6 (11:30 p.m.) 1,640 sec.-ft.

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.-- Backwater from debris Aug. 12 to Sept. 3.

## Grande Ronde River at Rondowa, Oreg.

Location.- Water-stage recorder, lat. 45°44', long. 177°47', in NW $\frac{1}{4}$  sec. 23, T. 3 N., R. 40 E., at Rondowa, 500 feet downstream from Wallowa River. Datum of gage is 2,281.4 feet above mean sea level, datum of 1929 (Union Pacific System track profile).

Drainage area.- 2,555 square miles.

Records available.- October 1926 to September 1941.

Average discharge.- 15 years, 1,807 second-feet.

Extremes.- Maximum discharge during year, 6,280 second-feet June 8 (gage height, 4.96 feet); minimum, 458 second-feet Dec. 13 (gage height, 1.19 feet).  
1926-41: Maximum discharge, 22,400 second-feet Mar. 18, 1932 (gage height, 9.30 feet), from rating curve extended above 10,000 second-feet; minimum, 225 second-feet Dec. 19, 1935.

Remarks.- Records excellent except those for period of ice effect, which are fair. Many diversions for irrigation above station. Flow slightly regulated by Wallowa Lake Reservoir.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

1.0	345	2.2	1,380	4.0	4,220
1.3	535	2.6	1,870	4.5	5,260
1.6	775	3.0	2,430	5.0	6,370
1.9	1,060	3.5	3,270		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	894	932	2,180	802	960	2,110	2,000	3,600	3,400	3,890	528	690
2	856	1,010	1,680	658	941	2,310	2,210	3,970	3,400	3,600	528	716
3	960	1,020	1,700	674	912	2,400	2,420	4,080	3,510	3,720	535	932
4	1,040	950	1,620	802	874	2,310	2,420	3,940	3,580	3,600	580	1,010
5	941	912	1,610	802	836	2,220	2,380	3,770	3,530	3,470	565	1,100
6	865	922	1,670	793	847	2,140	2,250	3,410	3,450	3,140	535	1,020
7	811	941	1,600	784	922	2,060	2,140	3,140	3,050	3,090	514	990
8	766	980	1,500	741	970	2,010	2,070	3,000	3,070	2,970	507	990
9	724	941	1,420	716	912	2,010	2,060	2,860	3,740	2,560	514	950
10	698	932	1,260	716	1,070	1,950	2,110	2,820	3,390	2,240	507	932
11	674	912	1,070	690	1,240	1,870	2,180	3,130	3,160	2,010	521	694
12	658	856	793	666	1,450	1,770	2,110	4,160	5,070	1,840	572	903
13	642	750	588	716	1,260	1,640	2,080	5,030	5,440	1,680	580	932
14	618	741	b550	758	1,140	1,540	2,060	4,480	5,280	1,520	535	932
15	602	741	b500	758	1,060	1,480	2,040	3,850	5,180	1,400	521	990
16	595	758	b550	741	1,000	1,430	2,000	3,620	4,840	1,290	514	990
17	580	620	b620	758	970	1,440	1,940	4,080	4,940	1,190	507	940
18	565	866	b600	960	932	1,520	1,870	4,240	5,090	1,080	500	980
19	558	820	894	1,030	960	1,570	1,720	3,890	5,240	1,010	542	1,130
20	542	775	990	1,000	950	1,570	1,720	3,680	5,130	912	634	1,080
21	542	820	1,190	990	960	1,520	1,670	3,580	4,780	829	595	1,050
22	542	802	1,110	941	970	1,490	1,640	3,740	4,570	741	595	990
23	542	732	1,090	950	1,050	1,480	1,680	4,040	4,460	690	595	950
24	565	775	1,050	1,080	1,240	1,420	1,740	4,440	4,240	642	572	922
25	922	775	1,020	1,300	1,190	1,370	1,870	4,420	3,980	602	588	894
26	874	741	1,060	1,700	1,150	1,370	2,000	4,260	3,450	565	666	856
27	1,010	775	1,670	1,450	1,120	1,400	2,210	3,930	3,110	595	698	829
28	903	847	1,340	1,250	1,420	1,490	2,420	3,340	3,220	588	674	811
29	894	1,630	1,160	1,100	-	1,580	2,590	3,140	4,630	572	650	902
30	941	2,310	1,080	1,020	-	1,780	2,890	3,070	4,400	550	732	775
31	950	-	1,020	1,000	-	1,880	-	3,310	-	535	724	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	23,274	1,040	542	751	46,160
November.....	27,776	2,310	732	926	55,090
December.....	36,585	2,160	500	1,180	72,570
Calendar year 1940.....	608,191	5,850	260	1,662	1,206,000
January.....	28,346	1,700	658	914	56,220
February.....	29,288	1,430	838	1,046	58,090
March.....	54,110	2,400	1,370	1,745	107,300
April.....	62,560	2,890	1,640	2,085	124,100
May.....	115,790	5,030	2,820	3,735	229,700
June.....	135,350	6,070	3,110	4,512	268,500
July.....	53,121	3,890	555	1,714	106,400
August.....	17,828	732	500	575	35,560
September.....	26,000	1,130	690	933	55,540
Water year 1940-41.....	612,028	6,070	500	1,677	1,214,000

b Stage-discharge relation affected by ice.

## Catherine Creek near Union, Oreg.

Location.- Water-stage recorder, lat. 45°09', long. 117°47', in SE $\frac{1}{4}$  sec. 2, T. 5 S., R. 40 E., 3 miles downstream from Little Catherine Creek and 6 miles southeast of Union. Datum of gage is 3,082.11 feet above mean sea level, datum of 1929.

Drainage area.- 105 square miles.

Records available.- May 1906 to May 1907 (gage heights only), August 1911 to December 1912, March to September 1915, February 1918 to August 1919, October 1925 to September 1941.

Average discharge.- 18 years (1911-12, 1918-19, 1925-41), 115 second-feet.

Extremes.- Maximum discharge during year, 500 second-feet May 13 (gage height, 2.89 feet); minimum, 24 second-feet Oct. 19-22.

1906-7, 1911-12, 1915, 1918-19, 1925-41: Maximum discharge observed, 1,240 second-feet May 21, 1912, June 3 or 4, 1933; minimum, 4 second-feet Nov. 26, 27, 1930.

Remarks.- Records fair except those for periods of ice effect, which are poor. A few small diversions above station for irrigation and some water diverted into Big Creek, in Powder River Basin.

Rating tables, water year 1940-41, except periods of ice effect or backwater from drift (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 29					Apr. 30 to Sept. 30				
0.8	26	1.4	84	2.0	203	1.0	44	1.6	133
1.0	41	1.6	118	2.3	275	1.2	67	1.8	176
1.2	60	1.8	159	2.6	360	1.4	97	2.0	225
								2.6	397
								2.9	504

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	55	54	b48	46	179	245	474	243	181	48	41
2	39	69	55	b45	45	205	270	437	233	176	47	67
3	45	63	57	b51	42	185	268	452	228	172	47	106
4	51	57	61	b60	41	161	262	407	218	156	47	109
5	45	55	64	b70	42	144	262	375	218	144	46	78
6	39	53	68	b62	44	128	245	335	225	133	43	66
7	35	54	66	b50	48	120	228	309	315	129	41	63
8	33	53	63	46	46	122	219	292	356	118	41	59
9	32	52	60	37	47	130	228	278	347	111	40	54
10	30	51	53	34	49	128	233	298	323	104	39	53
11	29	50	b50	32	53	126	221	347	306	99	42	51
12	28	46	b55	33	54	124	214	420	308	94	46	53
13	27	b39	b52	35	53	114	217	466	312	89	38	59
14	27	b55	b58	39	50	105	226	397	292	84	37	55
15	27	b43	b66	38	49	102	236	362	281	80	34	60
16	26	b45	b70	37	47	104	219	341	259	77	34	55
17	25	48	b73	39	48	120	203	341	270	73	33	51
18	25	47	b77	40	48	140	186	312	275	71	36	56
19	24	39	b74	43	46	138	179	286	267	70	87	59
20	24	46	b71	44	45	134	179	273	243	65	53	54
21	24	44	*b76	45	45	128	181	275	225	62	43	52
22	24	*37	57	46	45	124	188	292	215	60	40	50
23	25	41	59	45	47	114	208	323	205	59	40	47
24	41	40	59	*49	53	104	224	341	210	57	37	46
25	62	38	58	52	53	104	240	329	208	55	47	45
26	53	35	61	52	54	114	258	323	181	55	59	43
27	60	36	72	48	54	134	288	295	169	68	53	43
28	50	40	66	47	57	159	306	275	176	60	42	41
29	52	55	60	47	-	181	330	248	225	57	43	40
30	53	56	56	48	-	208	400	238	193	53	53	40
31	53	-	50	46	-	219	-	259	-	52	46	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,145	62	24	36.9	2,270
November.....	1,422	69	35	47.4	2,820
December.....	1,921	77	50	62.0	3,810
Calendar year 1940.....	37,393	477	17	102	74,150
January.....	1,408	70	32	45.4	2,790
February.....	1,378	57	41	49.2	2,730
March.....	4,298	219	102	139	8,520
April.....	7,162	400	179	239	14,210
May.....	10,400	474	238	335	20,630
June.....	7,524	356	169	251	14,920
July.....	2,864	181	52	92.4	5,690
August.....	1,390	87	33	44.5	2,740
September.....	1,696	109	40	56.5	3,560
Water year 1940-41.....	42,598	474	24	117	84,490

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.- Backwater from drift Mar. 28-31; discharge computed on basis of gage heights and engineer's notes.

## GRANDE RONDE RIVER BASIN

East Fork of Wallowa River near Joseph, Oreg.

Location.- Staff gage, lat. 45°16', long. 117°13', in SW¼ sec. 29, T. 3 S., R. 45 E., a quarter of a mile upstream from mouth, 1 mile upstream from Wallowa Lake, and 6 miles south of Joseph. Datum of gage is 4,517.69 feet above mean sea level, datum of 1929.

Drainage area.- 9.6 square miles.

Records available.- July 1924 to September 1941.

Average discharge.- 17 years, 11.6 second-feet.

Extremes.- Maximum discharge observed during year, 54 second-feet June 23, 25, 28 (gage height, 1.66 feet); minimum observed, 0.6 second-foot (regulated) Feb. 10 (gage height, 0.70 foot).

1924-41: Maximum discharge, 300 second-feet, based on extension of rating curve above 80 second-feet and unpublished records of storage in Wallowa Lake Reservoir, July 25, 1937 (gage height, 3.63 feet, from floodmark); minimum observed, 0.1 second-foot (regulated) Dec. 7, 1929, Nov. 1, 6, 1935.

Remarks.- Records fair except those for periods of ice effect, which are poor. Wallowa Falls power plant of Inland Power & Light Co., diverts water 1 mile above station. Gage read twice daily.

Rating tables, water year 1930-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 7

Jan. 8 to Sept. 30

0.7	0.4	0.7	0.6	1.3	22
.9	3.7	.9	4.0	1.5	38
1.1	10.6	1.1	11.4	1.7	59
1.3	21				

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	4.9	5.5	b2.7	2.2	2.6	1.7	16	34	44	15	8.8
2	11	5.5	3.1	a1.6	3.2	3.8	2.4	13	32	40	14	7.0
3	12	7.5	3.5	b1.4	1.4	2.6	2.4	16	229	48	14	7.9
4	10	3.3	3.1	b1.4	1.6	1.9	2.8	e16	30	49	11	7.4
5	8.6	2.4	3.3	b2.1	2.8	1.6	2.8	12	30	50	11	7.0
6	9.8	4.0	3.7	b1.4	1.7	2.0	3.6	12	33	46	10	6.4
7	6.7	6.7	3.1	b1.4	1.7	1.7	2.2	11	42	46	9.2	e14
8	6.1	4.3	4.3	b1.4	2.0	2.0	2.2	9.6	37	44	9.2	6.7
9	5.2	5.5	2.0	1.4	3.0	e3.3	2.4	10	36	44	9.2	6.4
10	4.3	e6.6	4.3	1.7	1.6	2.0	2.4	12	36	38	e12	6.1
11	5.2	b5.1	b4.2	2.4	2.0	1.7	2.4	14	38	34	10	6.4
12	5.2	b2.5	b2.0	2.6	2.2	b1.5	2.8	18	36	33	11	6.1
13	7.5	b.8	a2.2	1.7	2.6	b1.7	5.2	32	36	32	8.8	5.6
14	4.6	b3.2	a1.7	2.0	2.0	b1.6	1.7	27	38	29	7.0	9.6
15	4.6	b4.0	a3.6	2.2	b2.0	b2.0	2.0	25	46	29	6.7	6.7
16	3.7	4.9	a2.2	2.2	a2.7	2.4	1.9	26	42	29	6.4	5.8
17	3.7	5.5	a2.2	2.0	a2.0	2.0	1.9	28	42	27	8.8	5.2
18	3.7	3.3	a2.2	2.6	a2.0	2.0	2.6	28	48	25	6.7	8.8
19	4.3	b2.6	2.6	3.8	a2.0	1.9	3.0	22	48	26	7.9	8.3
20	e5.8	1.6	4.3	3.6	a2.2	3.0	4.3	21	46	25	7.4	11
21	4.0	4.9	3.7	2.0	2.2	2.6	2.2	25	46	21	6.4	11
22	4.3	*2.9	4.6	2.0	2.6	1.6	2.0	26	e49	21	8.8	7.4
23	6.4	b2.3	2.4	2.0	e3.6	e3.3	3.0	31	51	20	8.8	6.1
24	12	b4.8	2.4	2.4	1.7	1.4	3.4	36	50	20	11	5.2
25	10	3.7	4.0	2.2	1.4	1.7	3.8	e40	50	19	8.3	4.6
26	9.4	3.7	2.9	b3.7	b1.7	1.7	5.5	38	46	15	10	4.9
27	e10	3.3	4.3	2.0	*2.2	1.9	e3.1	33	42	21	9.2	5.5
28	6.7	3.3	2.9	1.9	4.0	1.9	6.7	32	54	20	7.9	8.3
29	6.7	4.9	e4.0	b1.9	-	1.9	11	35	46	19	7.0	4.3
30	5.5	2.9	2.4	1.7	-	e5.8	11	37	46	16	7.0	3.8
31	5.5	-	b2.0	1.4	-	1.7	-	36	-	15	9.2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	214.5	12	3.7	6.92	425
November.....	122.7	7.5	1.8	4.08	243
December.....	95.7	5.5	1.7	3.18	196
Calendar year 1940.....	3,566.6	46	.8	9.20	6,670
January.....	64.8	3.8	1.4	2.09	129
February.....	62.3	4.0	1.4	2.22	124
March.....	68.8	5.8	1.4	2.22	136
April.....	105.4	11	1.7	5.51	209
May.....	735.6	40	9.6	23.8	1,480
June.....	1,239	54	29	41.3	2,460
July.....	945	50	15	30.5	1,870
August.....	288.9	15	6.4	9.32	573
September.....	212.2	14	3.8	7.07	421
Water year 1940-41.....	4,158.9	54	.8	11.4	8,250

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for Wallowa Falls power-plant tailrace.

b Stage-discharge relation affected by ice.

c Gage reading not representative of average for day; discharge computed on basis of records for Wallowa Falls power-plant tailrace.



Wallowa Falls power-plant tailrace near Joseph, Oreg.

Location.- Staff gage and sharp crested weir, Lat. 45°16', long. 117°13', in SE¼ sec. 29, T. 3 S., R. 45 E., a quarter of a mile upstream from point where channel discharges into West Fork of Wallowa River and 6 miles south of Joseph. Datum of gage is 4,624.79 feet above mean sea level, datum of 1929.

Records available.- August 1924 to September 1941.

Average discharge.- 17 years, 7.34 second-feet.

Extremes.- Maximum discharge observed during year, 15.3 second-feet Sept. 1 (gage height, 0.94 foot); no flow at times.  
1924-41: Maximum discharge, 17 second-feet Dec. 1, 8, 1930, Jan. 9, 10, 1931; no flow at times.

Remarks.- Records good. Flow regulated by impulse wheel in power house. Water diverted at dam on East Fork of Wallowa River into a conduit 1 mile above power house, and discharged into West Fork a quarter of a mile downstream. Gage read hourly.

Cooperation.- Gage-height record furnished by Inland Power and Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	9.0	7.9	7.9	8.0	8.6	8.6	9.4	7.5	9.6	9.8	9.6
2	8.8	9.4	9.4	8.8	7.3	7.3	8.6	9.4	9.0	9.6	9.2	10.8
3	9.0	7.5	9.2	8.8	8.2	8.4	8.2	9.2	9.0	9.6	8.2	10.4
4	8.6	9.2	8.8	8.6	8.2	8.4	8.4	8.9	9.0	8.2	10.2	10.0
5	8.6	9.2	8.8	7.9	8.2	8.4	8.4	9.0	8.8	8.2	10.4	9.8
6	7.5	9.0	9.0	8.6	8.0	8.2	7.5	9.2	9.2	7.9	10.2	10.2
7	8.8	9.2	9.2	8.6	8.0	8.0	8.4	8.8	9.2	10.2	10.6	8.1
8	8.8	8.8	7.7	8.4	8.4	8.0	8.4	8.6	7.9	9.4	10.4	10.8
9	8.8	8.8	8.4	8.4	7.5	6.7	8.6	8.6	9.2	9.6	10.4	11.0
10	8.4	7.2	9.0	8.6	8.4	8.2	8.6	8.4	9.2	9.8	7.7	10.6
11	8.6	7.9	8.8	8.2	8.6	8.0	8.4	7.9	9.4	9.6	10.6	10.8
12	8.0	9.0	9.0	7.5	8.2	8.2	8.2	9.4	9.2	9.8	10.6	10.8
13	7.5	9.2	8.8	8.6	8.2	8.0	7.3	9.2	9.2	8.0	10.4	9.6
14	8.4	8.8	8.8	8.6	8.0	8.0	8.4	9.0	8.6	10.4	10.4	8.2
15	8.4	9.0	7.4	8.6	8.0	8.0	8.4	9.2	7.5	10.2	10.6	10.0
16	9.0	9.2	8.8	8.4	7.3	7.3	8.6	9.0	8.8	10.2	9.8	10.0
17	9.0	7.9	8.8	8.4	8.0	8.0	9.0	9.0	9.2	10.2	7.9	10.4
18	8.8	9.2	9.0	8.6	8.0	7.9	8.4	7.5	9.8	10.0	10.4	10.6
19	8.2	9.4	9.0	7.5	8.0	7.9	8.4	9.4	9.6	9.4	10.4	10.2
20	6.7	9.6	9.2	8.6	8.0	7.7	7.7	9.0	9.8	8.2	10.2	9.4
21	8.6	8.0	9.2	8.8	8.0	7.9	9.2	9.0	9.4	9.8	10.0	8.0
22	8.6	9.2	8.0	8.6	8.0	7.9	9.0	9.0	6.4	9.6	10.0	10.2
23	9.0	9.2	9.2	8.6	7.0	6.1	9.0	9.0	9.6	9.6	9.8	10.4
24	9.0	7.7	8.6	8.4	8.0	8.0	8.6	9.2	9.6	9.8	8.0	10.4
25	8.6	9.2	7.9	8.4	8.0	7.9	9.0	7.2	9.4	9.8	10.2	10.6
26	8.8	9.4	8.8	6.9	8.0	7.9	8.8	9.4	9.4	9.8	10.0	10.2
27	7.4	9.4	8.8	8.6	8.0	7.9	7.4	9.6	9.8	7.9	10.2	8.6
28	9.2	9.2	9.0	8.4	8.6	7.9	9.6	9.4	9.2	9.8	10.2	9.6
29	9.2	9.0	7.4	8.4	-	8.4	9.6	9.4	8.2	9.8	10.4	10.4
30	8.8	8.8	9.0	8.4	-	4.9	9.4	8.0	9.2	10.0	10.2	10.0
31	9.0	-	8.8	8.2	-	7.9	-	9.0	-	9.8	8.4	-
Month						Second-foot-days	Maximum	Minimum	• Mean	Run-off in acre-feet		
October.....						264.9	9.2	6.7	8.55	525		
November.....						265.6	9.6	7.2	8.85	527		
December.....						269.7	9.4	7.4	8.70	535		
Calendar year 1940.....						2,818.3	9.6	0	7.70	5,590		
January.....						259.3	8.8	6.9	8.56	514		
February.....						224.1	8.6	7.0	8.00	444		
March.....						241.9	8.6	4.9	7.80	480		
April.....						256.1	9.6	7.3	8.54	508		
May.....						274.3	9.6	6.9	8.85	544		
June.....						269.3	9.8	6.4	8.98	534		
July.....						294.0	10.4	7.9	9.48	583		
August.....						305.8	10.6	7.7	9.86	607		
September.....						299.7	11.0	8.0	9.99	594		
Water year 1940-41.....						3,224.7	11.0	4.9	8.83	6,400		

## Hurricane Creek near Joseph, Oreg.

Location.- Water-stage recorder, lat. 45°20', long. 117°18', in NE¼ sec. 3, T. 3 S., R. 44 E., above intake of Moonshine ditch and 3½ miles southwest of Joseph.

Drainage area.- 31 square miles.

Records available.- April to September 1915, April 1924 to September 1941.

Average discharge.- 14 years (1927-41), 62.9 second-feet.

Extremes.- Maximum discharge during year, 290 second-feet June 29 (gage height, 2.56 feet); minimum, 12 second-feet Mar. 14, 1915, 1924-41: Maximum discharge, 716 second-feet May 26, 1928 (gage height, 2.65 feet, site and datum then in use); minimum, 3.4 second-feet Feb. 10, 1938 (gage height, 0.91 foot).

Remarks.- Records good. No diversion above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 9-29)

1.2	14	2.0	115
1.4	25	2.2	163
1.6	50	2.4	227
1.8	77	2.6	307

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	39	32	19	18	22	29	115	146	192	62	44
2	58	40	31	20	18	18	31	102	146	192	59	49
3	56	38	31	22	18	18	31	109	156	192	58	53
4	54	35	31	23	18	17	30	98	156	185	56	62
5	50	35	31	25	18	17	30	87	156	175	55	60
6	45	36	30	25	18	17	29	79	169	172	54	51
7	44	37	30	25	18	17	28	74	199	172	54	54
8	42	36	30	24	17	17	29	71	158	153	53	53
9	40	36	27	24	17	17	30	71	160	140	51	50
10	39	35	24	23	17	16	31	86	150	133	49	49
11	38	35	22	23	17	16	30	124	169	129	49	48
12	37	30	21	23	17	16	30	199	210	122	48	49
13	37	29	18	22	16	16	29	218	254	120	44	49
14	36	31	19	22	16	15	30	156	250	120	42	49
15	35	35	22	22	15	18	31	138	265	117	42	51
16	34	35	23	22	15	18	31	138	242	113	40	53
17	34	35	26	22	16	19	31	158	257	111	40	53
18	33	35	29	22	16	20	30	140	257	107	39	a53
19	33	32	30	22	16	20	29	122	224	100	40	a52
20	32	33	31	21	16	20	30	120	183	96	40	a52
21	33	33	30	21	16	19	31	140	175	91	39	a51
22	32	32	27	21	16	20	35	169	206	89	45	a51
23	32	30	27	20	16	19	40	202	216	82	45	a50
24	53	31	26	20	16	19	45	231	199	79	43	49
25	53	31	26	20	16	19	49	231	169	76	44	48
26	46	30	26	19	16	21	54	210	148	74	46	48
27	45	32	26	18	16	23	62	178	143	76	49	48
28	42	34	26	18	19	24	70	148	216	73	45	46
29	42	36	26	18	-	26	80	136	265	70	44	45
30	40	34	26	18	-	26	96	146	210	66	48	45
31	40	-	25	18	-	27	-	156	-	73	46	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acre-feet
October.....	1,298	63	32	41.9	1.35	1.56	2,570
November.....	1,020	40	29	34.0	1.10	1.22	2,020
December.....	829	32	18	26.7	.86	.99	1,640
Calendar year 1940.....	21,646	305	16	59.1	1.91	25.95	42,920
January.....	662	25	18	21.4	.69	.79	1,310
February.....	468	19	15	16.7	.53	.56	928
March.....	597	27	15	19.3	.62	.72	1,180
April.....	1,161	96	28	38.7	1.25	1.39	2,300
May.....	4,350	231	71	140	4.52	5.22	8,630
June.....	5,654	265	145	195	6.29	7.02	11,610
July.....	3,668	192	66	119	3.84	4.42	7,320
August.....	1,469	82	39	47.4	1.53	1.76	2,910
September.....	1,515	62	44	50.5	1.63	1.82	3,000
Water year 1940-41.....	22,911	265	15	62.8	2.03	27.47	45,420

a No gage-height record; discharge computed on basis of range of stage and records for Bear Creek near Wallows.

## Lostine River near Lostine, Oreg.

Location.- Water-stage recorder, lat. 45°26', long. 117°26', in NW¼ sec. 34, T. 1 S., R. 45 E., 3½ miles south of Lostine and 10 miles upstream from mouth.

Records available.- August 1912 to March 1914, April to September 1915, July 1925 to September 1941.

Average discharge.- 14 years (1912-13, 1928-41), 170 second-feet.

Extremes.- Maximum discharge during year, 958 second-feet June 17 (gage height, 4.77 feet); minimum, 20 second-feet Feb. 15 (gage height, 0.61 foot).  
1912-14, 1915, 1925-41: Maximum discharge, 2,540 second-feet May 27, 1913; minimum, 10 second-feet Nov. 28-30, 1936.

Remarks.- Records good except those for periods of ice effect, which are poor. No large diversions above station. Flow regulated slightly by Minam Lake Reservoir.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Feb. 20 to Mar. 17)

Oct. 1 to May 13				May 14 to Sept. 30			
0.8	31	2.6	266	1.0	43	2.6	286
1.0	44	3.0	352	1.2	64	3.0	380
1.2	61	3.4	459	1.4	85	3.4	490
1.4	83	3.8	584	1.6	110	3.8	610
1.6	107	4.2	724	1.9	155	4.2	745
1.9	147	4.6	885	2.2	206	4.6	890
2.2	192						

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	90	76	b33	38	55	a94	453	469	529	82	56
2	126	97	72	b35	37	50	a100	412	469	520	78	87
3	136	81	71	b37	56	47	a103	418	496	517	74	57
4	123	81	71	b39	32	46	106	362	505	494	72	123
5	117	79	73	a42	40	46	105	307	499	445	69	117
6	108	85	71	43	35	46	100	264	535	405	69	93
7	101	89	69	43	37	46	98	235	658	405	66	92
8	95	87	68	41	36	46	97	223	520	355	64	93
9	89	85	63	41	36	46	102	218	448	299	62	84
10	83	81	53	40	37	46	107	260	454	271	60	84
11	81	79	b46	40	38	46	105	391	514	249	59	81
12	77	72	b41	40	38	46	100	695	637	233	64	86
13	72	b63	b38	43	36	46	97	820	836	216	58	98
14	68	b69	b37	44	36	46	97	616	804	214	56	96
15	65	73	b39	41	b35	46	106	505	882	206	54	109
16	62	73	b43	41	b35	47	101	502	790	197	53	109
17	58	75	46	41	b36	52	99	499	866	185	51	116
18	56	72	56	45	b37	57	95	499	836	174	50	134
19	55	67	56	43	38	57	93	402	728	158	53	155
20	53	70	65	42	37	58	91	370	592	149	55	142
21	53	66	68	40	38	56	97	433	538	136	52	133
22	53	63	63	40	38	57	109	553	583	127	54	124
23	52	57	59	39	38	57	126	678	634	120	54	118
24	76	58	58	39	38	56	144	815	610	111	52	111
25	129	56	47	41	38	57	166	822	496	104	54	107
26	108	53	57	42	35	60	184	773	402	98	62	105
27	108	58	61	38	39	a64	216	644	372	104	66	101
28	95	64	59	38	44	a69	248	499	502	106	58	97
29	95	99	56	36	-	a75	292	422	759	100	56	95
30	95	84	53	40	-	a80	362	457	598	89	63	93
31	95	-	51	38	-	a88	-	496	-	85	62	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,716	136	52	87.6	5,390
November.....	2,236	99	53	74.5	4,440
December.....	1,796	76	37	57.9	3,560
Calendar year 1940.....	56,525	1,060	24	154	112,100
January.....	1,245	45	33	40.2	2,470
February.....	1,044	44	35	37.3	2,070
March.....	1,693	88	45	54.6	3,360
April.....	3,936	362	91	131	7,810
May.....	15,134	822	216	488	30,020
June.....	18,032	882	372	601	35,770
July.....	7,391	529	85	233	14,660
August.....	1,881	82	50	60.7	3,730
September.....	3,106	155	56	104	6,160
Water year 1940-41.....	60,210	882	33	165	119,400

a No gage-height record; discharge computed on basis of records for Hurricane Creek near Joseph and Bear Creek near Wallawa.

b Stage-discharge relation affected by ice.

## GRANDE RONDE RIVER BASIN

Bear Creek near Wallowa, Oreg.

Location.- Water-stage recorder, lat. 45°32', long. 117°33', in NE¼ sec. 34, T. 1 N., R. 42 E., at bridge 4½ miles southwest of Wallowa.

Records available.- April to September 1915, April 1931 to September 1941. April 1924 to November 1931 at site 1 mile upstream and above intakes of two irrigation ditches with a combined capacity of about 3 second-feet.

Average discharge.- 12 years (1929-41), 94.2 second-feet.

Extremes.- Maximum discharge during year, 498 second-feet May 23 (gage height, 2.24 feet); minimum, 13 second-feet Aug. 17-19, 21-24, 1915, 1924-41; Maximum discharge, 1,620 second-feet Apr. 22, 1936 (gage height, 3.82 feet, from floodmarks), from rating curve extended above 950 second-feet; minimum, 3 second-feet Jan. 20, Feb. 1, 1937.

Remarks.- Records fair except those for periods Nov. 13 to Dec. 20, Dec. 31 to Jan. 23, which are poor. Small diversions above station for irrigation.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1 to Nov. 12)

Oct. 1 to Dec. 21

Dec. 22 to Sept. 30

0.8	15.8	0.7	15	1.5	142
1.0	31	.9	29	1.8	260
1.2	55	1.1	54	2.2	470
1.4	89	1.3	90		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	55	82	b28	28	57	107	325	292	292	22	16
2	45	60	78	b30	28	65	120	300	292	274	20	18
3	54	57	75	b32	28	67	122	310	292	269	20	25
4	57	54	75	a34	28	65	117	262	292	233	19	41
5	52	54	78	a35	28	65	112	264	274	207	19	48
6	50	54	78	a35	28	62	102	228	297	193	17	40
7	47	54	75	a35	28	60	95	207	394	162	17	41
8	45	51	71	a33	28	60	95	195	302	136	16	41
9	42	51	68	a33	26	59	95	191	372	117	16	36
10	38	48	60	a32	28	59	100	207	366	100	16	34
11	36	47	54	a32	27	59	97	300	360	88	16	32
12	33	38	b42	a32	27	57	92	404	377	78	16	34
13	31	a31	b30	a33	27	56	90	464	422	70	15	43
14	29	b29	b31	a34	27	54	88	399	360	66	15	43
15	27	b32	b34	a32	27	51	97	330	360	59	14	54
16	25	35	b36	a32	27	51	95	325	335	55	14	54
17	24	39	b38	a32	27	56	90	388	388	51	13	56
18	22	36	b42	a34	27	64	64	330	399	46	13	62
19	21	35	b45	a32	27	65	80	296	388	43	13	68
20	21	34	b46	a30	27	65	76	267	372	38	14	65
21	23	33	b45	a29	27	62	76	315	335	36	13	62
22	21	29	44	a29	27	60	80	360	320	32	13	59
23	21	29	43	a28	28	59	92	416	300	30	13	54
24	34	29	44	a28	29	56	109	468	282	29	13	51
25	46	28	43	29	29	54	128	440	261	27	14	60
26	52	26	43	30	29	54	139	428	215	26	15	46
27	52	30	48	29	30	59	165	350	195	28	16	43
28	48	38	46	29	38	64	175	296	246	30	14	39
29	52	75	43	28	-	70	195	264	410	27	16	37
30	54	84	41	28	-	84	269	274	325	24	20	34
31	56	-	b39	28	-	97	-	296	-	23	18	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,198	57	21	38.6	2,380
November.....	1,293	94	26	43.1	2,560
December.....	1,617	82	30	52.2	3,210
Calendar year 1940.....	35,332.2	598	5.7	96.5	70,080
January.....	965	55	28	31.1	1,910
February.....	753	38	27	28.1	1,560
March.....	1,916	97	51	61.8	3,800
April.....	3,382	269	76	113	6,710
May.....	9,918	468	191	320	19,670
June.....	9,883	422	195	329	19,600
July.....	2,679	292	23	92.9	5,710
August.....	480	22	13	15.8	972
September.....	1,326	68	16	44.2	2,630
Water year 1940-41.....	35,655	468	13	97.7	70,710

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of 2 discharge measurements, gage heights, weather records, and records for Hurricane Creek near Joseph and Lostine River near Lostine.

b Stage-discharge relation affected by ice.

## Asotin Creek near Asotin, Wash.

Location.- Staff gage, lat. 46°20', long. 117°12', in sec. 20, T. 10 N., R. 45 E., half a mile upstream from Washington Water Power Co.'s diversion for water supply and irrigation, 4 miles upstream from George Creek, and 8 miles west of Asotin.

Drainage area.- 171 square miles.

Records available.- August 1928 to September 1941. March 1904 to November 1906, August 1910 to October 1911, at practically same site.

Average discharge.- 13 years (1928-41), 56.6 second-feet.

Extremes.- Maximum discharge observed during year, 128 second-feet May 1 (gage height, 1.37 feet); minimum observed, 27 second-feet Aug. 10 (gage height, 0.58 foot).  
1904-6, 1910-11, 1928-41: Maximum discharge observed, 1,180 second-feet Apr. 15, 1904 (gage height, 4.3 feet, datum then in use); minimum observed, 16 second-feet Jan. 5, 1937.

Remarks.- Records good except those for period of ice effect, which are poor. Large part of low flow diverted for irrigation. No regulation. Gage read twice daily.

Cooperation.- Gage-height record and results of one discharge measurement furnished by Washington Water Power Co.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1 to Nov. 30)

0.6	29	0.8	58	1.2	99
.7	38	1.0	71	1.3	115
.8	47	1.1	84		

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	38	50	55	47	56	61	122	84	81	36	34
2	32	39	47	47	47	66	84	122	84	79	34	39
3	52	39	50	50	46	71	84	117	81	79	35	38
4	48	38	50	47	45	66	79	105	80	71	37	36
5	38	38	48	45	45	53	76	110	76	66	36	34
6	34	37	51	45	*44	58	73	102	76	63	35	32
7	32	36	48	43	52	56	69	93	99	64	31	32
8	30	41	50	43	46	55	66	93	121	58	30	33
9	30	39	*47	43	45	54	68	84	122	55	30	33
10	30	39	45	41	45	54	73	79	112	54	29	33
11	30	38	43	41	47	54	73	81	102	50	29	36
12	30	34	39	39	48	52	72	87	93	47	32	36
13	29	32	b36	39	45	47	71	102	87	46	31	34
14	29	34	b34	42	45	45	71	96	81	45	30	34
15	29	38	b32	41	44	47	69	87	88	43	30	36
16	29	38	b32	40	42	45	68	84	79	43	38	34
17	30	37	b34	40	41	45	64	105	81	41	32	35
18	30	38	b37	47	41	47	62	122	88	40	32	36
19	29	37	39	47	41	45	60	115	99	39	30	39
20	30	37	41	47	41	46	57	107	91	38	32	36
21	30	38	83	47	41	45	57	96	87	38	30	35
22	30	37	77	47	41	46	56	91	83	38	30	34
23	30	35	78	46	40	43	57	87	79	37	33	33
24	30	35	75	45	*41	43	58	84	76	36	32	32
25	32	35	76	47	41	42	58	80	75	36	33	32
26	33	34	76	60	39	43	61	83	68	36	35	32
27	39	35	80	58	39	44	67	79	64	36	35	32
28	35	35	76	55	41	46	72	77	71	38	35	32
29	35	51	72	54	-	50	75	79	96	39	34	32
30	35	54	68	52	-	56	81	77	86	37	33	31
31	35	-	61	50	-	58	-	84	-	36	33	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,018	52	29	32.8	2,080
November.....	1,139	54	32	38.0	2,260
December.....	1,676	83	32	54.1	3,320
Calendar year 1940.....	18,176	215	17	49.7	36,050
January.....	1,443	60	39	46.5	2,860
February.....	1,220	52	39	43.6	2,420
March.....	1,588	71	42	51.2	3,150
April.....	2,042	84	56	68.1	4,050
May.....	2,930	122	77	94.5	5,810
June.....	2,809	122	64	87.0	5,170
July.....	1,509	81	36	48.7	2,990
August.....	1,012	36	29	32.6	2,010
September.....	1,023	39	31	34.1	2,030
Water year 1940-41.....	19,209	122	29	52.6	38,090

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

## Selway River near Lowell, Idaho

Location.- Water-stage recorder, lat. 46°05', long. 115°31', in sec. 25, T. 32 N., R. 7 E., a quarter of a mile upstream from O'Hara Creek and 7 miles upstream from Lowell post office.

Drainage area.- 1,510 square miles.

Records available.- April 1911 to September, 1912 (gage heights or fragmentary discharge only); October 1929 to September 1941.

Average discharge.- 12 years (1929-41), 3,127 second-feet.

Extremes.- Maximum discharge during year, 16,100 second-feet May 13 (gage height, 9.21 feet); minimum, 257 second-feet Dec. 13 (gage height, 2.21 feet).  
1929-41: Maximum discharge, 33,800 second-feet June 14, 1933 (gage height, 13.17 feet); minimum, probably less than 100 second-feet Jan. 8, 1937, during period of ice effect.

Remarks.- Records excellent. No diversion.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,380	880	1,300	748	880	1,140	3,270	8,690	8,080	3,010	1,020	682
2	1,100	934	1,190	504	889	1,400	3,640	9,650	7,220	2,840	963	666
3	1,680	992	1,190	372	843	1,410	3,820	9,980	6,680	2,680	907	691
4	1,670	916	1,400	604	791	1,380	3,640	9,650	6,680	2,680	880	843
5	1,430	852	1,350	1,030	755	1,340	3,640	9,000	6,420	2,680	843	1,140
6	1,240	808	1,410	880	757	1,330	3,450	7,790	6,040	2,370	817	1,490
7	1,110	570	1,310	907	826	1,290	3,180	6,680	6,040	2,440	791	1,370
8	1,020	925	1,220	861	870	1,300	3,100	6,300	6,950	2,220	757	1,190
9	944	907	1,000	740	861	1,340	3,100	6,300	6,300	2,010	757	1,140
10	889	870	1,090	791	861	1,300	3,270	6,680	6,800	1,940	774	1,450
11	843	782	925	934	907	1,260	3,540	6,420	5,440	1,810	748	1,350
12	808	732	689	1,140	982	1,210	3,360	9,000	5,320	1,770	765	1,210
13	817	497	320	1,240	944	1,170	3,450	14,600	5,210	1,680	817	1,460
14	861	517	378	1,070	898	1,130	3,360	12,900	5,440	1,620	791	1,600
15	825	774	740	944	862	1,140	3,450	9,980	4,760	1,540	732	1,980
16	762	870	892	861	800	1,170	3,270	8,690	4,330	1,440	699	1,940
17	748	889	757	791	808	1,210	3,180	6,690	4,120	1,420	682	1,740
18	715	954	1,230	880	834	1,380	3,010	8,380	4,440	1,440	651	1,660
19	691	880	1,240	1,010	861	1,440	2,840	7,220	5,660	1,350	635	1,630
20	674	732	1,150	992	898	1,430	2,760	6,420	6,300	1,290	620	1,660
21	674	774	1,030	954	861	1,420	2,840	6,170	5,100	1,200	651	1,570
22	699	808	1,020	907	852	1,400	2,920	6,550	4,540	1,140	682	1,500
23	691	674	992	870	861	1,440	3,270	7,080	4,220	1,100	682	1,410
24	674	674	944	861	899	1,400	3,640	7,940	3,920	1,110	748	1,330
25	757	800	916	861	916	1,410	4,020	8,380	3,730	1,210	732	1,260
26	852	782	907	916	861	1,490	4,330	7,790	3,360	1,170	757	1,220
27	834	757	925	898	862	1,680	4,980	7,640	3,270	1,160	834	1,460
28	808	825	925	843	916	1,980	5,560	6,550	3,640	1,180	732	1,450
29	782	1,720	870	791	-	2,150	6,170	5,800	3,540	1,320	699	1,360
30	800	1,710	800	723	-	2,760	7,220	6,420	3,270	1,140	682	1,330
31	843	-	825	765	-	3,100	-	6,820	-	1,040	707	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-foot
October.....	28,641	1,680	674	924	0.612	0.71	56,810
November.....	26,055	1,720	497	868	.675	.64	51,680
December.....	31,035	1,410	320	1,001	.663	.76	61,560
Calendar year 1940.....	1,045,283	18,600	320	2,856	1.89	26.73	2,073,000
January.....	26,688	1,240	372	861	.570	.66	52,830
February.....	24,134	982	787	862	.571	.69	47,870
March.....	45,680	3,100	1,130	1,480	.980	1.13	91,000
April.....	111,180	7,220	2,760	3,706	2.45	2.73	220,600
May.....	248,560	14,600	5,680	8,018	5.31	6.12	493,000
June.....	155,720	8,080	3,270	5,191	3.44	3.84	308,900
July.....	53,000	3,010	1,040	1,710	1.13	1.30	108,100
August.....	23,605	1,020	820	761	.504	.68	46,820
September.....	40,582	1,940	666	1,353	.896	1.00	80,490
Water year 1940-41.....	816,080	14,500	320	2,233	1.48	20.06	1,617,000

## Clearwater River at Kamiah, Idaho

Location.- Water-stage recorder, lat. 46°14', long. 116°01', in sec. 1, T. 33 N., R. 3 E., 300 feet upstream from highway bridge at Kamiah and 6 miles downstream from South Fork of Clearwater River.

Drainage area.- 4,850 square miles.

Records available.- August 1910 to September 1941.

Average discharge.- 31 years, 7,910 second-feet.

Extremes.- Maximum discharge during year, 28,900 second-feet May 13 (gage height, 10.86 feet); minimum, 523 second-feet Dec. 14 (gage height, 2.57 feet).  
1910-41: Maximum discharge observed, 81,400 second-feet June 10, 1933 (gage height, 16.53 feet), from rating curve extended above 70,000 second-feet; minimum discharge, probably less than 200 second-feet Jan. 8, 1937, during period of ice effect.

Remarks.- Records excellent. Practically no diversion or regulation above station.

Cooperation.- Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating tables, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 15				Dec. 16 to Sept. 30			
2.7	645	4.0	2,310	2.9	850	4.5	3,240
3.0	960	4.6	3,310	3.2	1,195	5.0	4,250
3.5	1,580	5.2	4,540	3.5	1,590	5.5	5,390
				4.0	2,350	6.5	8,280
						7.5	11,780
						8.5	15,800
						9.5	20,650
						10.5	26,410

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,710	1,950	3,400	1,740	1,820	2,520	6,340	15,800	17,200	7,180	2,140	1,590
2	2,280	2,120	2,790	1,500	1,900	3,240	7,640	18,100	16,200	6,740	2,030	1,490
3	3,490	2,550	2,790	915	1,880	3,430	8,610	18,600	14,500	6,310	1,920	1,610
4	4,090	2,390	3,220	1,020	1,780	3,430	8,120	18,100	14,100	6,040	1,840	1,650
5	3,130	2,070	3,310	1,820	1,690	3,240	7,500	17,600	13,700	5,770	1,780	2,170
6	2,630	1,860	3,400	1,820	1,630	3,240	7,800	15,300	12,900	5,270	1,700	3,140
7	2,200	1,850	3,220	1,900	1,720	3,050	7,180	13,700	14,100	5,150	1,650	3,140
8	1,980	2,120	2,880	1,860	1,780	3,050	6,740	12,900	16,600	5,150	1,580	2,690
9	1,820	2,120	2,880	1,670	1,790	3,140	6,600	12,200	16,200	4,580	1,550	2,550
10	1,690	2,070	2,630	1,520	1,820	3,050	7,030	11,400	14,100	4,280	1,560	2,780
11	1,590	1,890	2,310	1,420	1,910	2,960	8,810	12,200	12,900	3,940	1,580	2,870
12	1,520	1,660	1,710	1,370	2,240	2,780	8,810	15,800	12,200	3,530	1,660	2,520
13	1,490	1,310	1,030	1,480	2,210	2,600	8,120	24,400	11,400	3,630	1,670	2,870
14	1,620	1,170	665	1,860	2,060	2,520	7,950	24,600	12,200	3,530	1,700	3,540
15	1,640	1,320	645	1,970	1,920	2,520	7,950	19,100	10,700	3,340	1,580	3,630
16	1,540	1,660	1,540	1,780	1,790	2,600	7,640	15,700	9,970	3,050	1,490	4,690
17	1,450	1,720	1,220	1,750	1,730	2,690	7,180	16,200	9,620	2,950	1,440	3,940
18	1,410	1,940	2,110	2,190	1,740	2,950	6,840	17,200	10,700	2,950	1,400	3,530
19	1,350	2,000	2,440	2,500	1,790	3,240	6,450	14,500	12,900	2,870	1,330	3,730
20	1,310	1,720	2,440	2,600	1,840	3,240	6,170	13,300	16,200	2,780	1,300	3,730
21	1,320	1,610	2,350	2,440	1,850	3,140	6,170	12,500	12,500	2,600	1,310	3,530
22	1,400	1,680	2,350	2,290	1,820	3,140	6,310	12,500	11,000	2,440	1,440	3,340
23	1,400	1,580	2,330	2,170	1,850	3,340	6,740	13,300	9,970	2,300	1,440	3,140
24	1,560	1,460	2,250	2,110	2,020	3,240	7,480	14,500	8,940	2,220	1,600	2,870
25	1,480	1,580	2,170	2,090	2,140	3,140	8,120	16,200	8,610	2,320	1,650	2,690
26	1,820	1,720	2,150	2,170	2,060	3,240	8,610	15,400	7,800	2,520	1,680	2,600
27	1,830	1,690	2,130	2,150	1,960	3,530	9,620	14,500	7,330	2,440	1,540	2,870
28	1,830	1,800	2,220	2,030	2,270	4,040	10,700	13,700	8,280	2,520	2,000	3,140
29	1,760	3,600	2,060	1,880	-	4,470	11,800	12,200	8,610	2,780	1,730	2,870
30	1,720	4,540	1,910	1,730	-	5,820	13,300	12,500	8,120	2,690	1,650	2,730
31	1,780	-	1,880	1,700	-	6,600	-	14,100	-	2,300	1,690	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	58,650	4,090	1,310	1,892	0.390	0.45	116,300
November.....	58,740	4,540	1,170	1,958	.404	.45	115,600
December.....	70,440	3,400	645	2,272	.466	.54	139,700
Calendar year 1940.....	2,191,522	35,000	645	5,968	1.23	16.81	4,347,000
January.....	57,336	2,600	916	1,850	.381	.44	113,700
February.....	53,010	2,270	1,630	1,693	.390	.41	105,100
March.....	102,900	6,600	2,620	3,319	.684	.79	204,100
April.....	253,750	13,300	6,170	7,963	1.64	1.83	475,600
May.....	479,600	24,600	11,400	15,470	3.19	2.68	951,300
June.....	361,550	18,600	7,330	12,050	2.43	2.77	717,100
July.....	116,460	7,180	2,220	3,757	.775	.89	231,000
August.....	50,530	2,140	1,300	1,630	.335	.39	100,200
September.....	87,490	4,690	1,490	2,916	.601	.67	173,800
Water year 1940-41.....	1,735,456	24,600	645	4,755	.980	13.51	3,442,000

## CLEARWATER RIVER BASIN

## Clearwater River at Spalding, Idaho

Location.- Water-stage recorder, lat. 46°25', long. 116°51', in lot 22, sec. 22, T. 36 N., R. 4 W., a quarter of a mile downstream from Lapwai Creek and three-eighths of a mile northwest of Spalding post office.

Drainage area.- 9,570 square miles.

Records available.- March 1926 to September 1941.

Average discharge.- 15 years, 13,850 second-feet.

Extremes.- Maximum discharge during year, 39,700 second-feet May 13 (gage height, 10.94 feet); minimum, 1,450 second-feet Dec. 16 (gage height, 2.08 feet).  
1926-41: Maximum discharge, 172,000 second-feet Dec. 23, 1933 (gage height, 23.19 feet), from rating curve extended above 100,000 second-feet by logarithmic plotting; minimum, probably less than 500 second-feet Jan. 9, 1937, during period of ice effect.  
Maximum stage known, 25.6 feet Jan. 5, 1923 (site and datum then in use), during severe ice jam.

Remarks.- Records excellent except those for period of no gage height record or those based on staff-gage readings, which are good. Small diversions from lower tributaries; no regulation.

## Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,700	4,390	10,400	6,040	5,910	6,980	13,200	23,700	25,600	12,000	3,930	3,110
2	4,590	4,940	7,710	4,940	6,300	10,100	14,100	26,800	28,800	11,200	3,720	3,020
3	6,000	5,660	7,260	3,720	6,300	12,000	15,900	28,200	24,300	10,400	3,620	2,920
4	9,000	5,420	7,580	3,510	5,910	11,200	16,400	28,200	23,700	10,100	3,410	3,020
5	6,980	4,610	8,670	3,820	5,410	10,400	16,400	28,800	22,600	9,360	3,130	3,310
6	5,410	4,070	8,670	5,530	5,170	10,100	15,900	28,200	21,400	9,010	3,210	4,940
7	4,370	3,760	8,340	5,170	5,170	9,360	14,500	23,700	21,400	8,340	3,110	5,550
8	3,820	4,390	7,260	5,050	5,290	9,010	13,200	22,000	26,800	8,340	2,920	5,050
9	3,510	5,080	6,840	4,590	5,290	9,010	12,800	21,400	28,200	7,710	2,920	4,370
10	3,210	4,840	6,570	4,150	5,530	8,670	13,200	19,800	23,700	7,120	2,820	4,260
11	3,020	4,280	5,780	3,820	6,570	8,340	16,400	20,400	20,900	6,840	2,920	5,050
12	2,920	3,660	4,590	3,620	7,260	7,710	17,800	23,200	19,300	6,440	2,920	4,700
13	3,020	3,180	3,020	3,620	7,120	7,120	16,800	31,600	17,800	6,300	2,920	4,940
14	3,020	2,460	2,010	4,150	6,570	6,570	16,400	37,400	17,800	6,040	3,110	6,700
15	3,110	2,550	1,670	4,520	6,040	6,420	15,400	30,200	17,300	5,660	3,110	6,570
16	3,020	2,990	1,660	4,700	5,660	6,550	15,400	26,200	15,500	5,410	2,820	9,010
17	2,820	3,270	3,210	4,480	5,290	6,420	14,100	27,500	15,400	5,170	2,730	7,710
18	2,640	3,560	3,820	5,910	5,170	6,520	13,600	30,900	16,200	5,050	2,730	6,570
19	2,550	3,960	5,660	10,100	5,050	7,780	12,400	26,800	18,500	5,050	2,550	6,040
20	2,460	3,620	6,440	10,100	5,050	7,500	12,000	23,700	24,600	4,940	2,460	6,300
21	2,460	3,210	8,340	9,010	5,170	7,500	11,600	22,000	20,900	4,700	2,370	6,040
22	2,550	3,210	8,670	9,020	5,050	7,360	11,600	20,900	17,800	4,370	2,460	5,660
23	2,640	3,310	8,670	7,560	5,050	7,500	12,000	21,400	15,900	4,150	2,640	5,290
24	2,640	2,920	8,340	6,980	5,290	7,500	13,200	22,000	14,500	4,040	2,640	4,940
25	2,730	2,920	9,010	7,710	5,780	7,360	14,100	23,700	13,600	3,930	2,920	4,700
26	3,620	3,210	9,360	10,100	5,660	7,500	15,000	23,700	12,800	4,040	2,730	4,480
27	3,930	3,410	11,200	9,720	5,410	7,780	16,900	22,600	12,000	4,260	2,920	4,370
28	3,960	3,720	11,200	8,340	5,660	8,680	18,300	22,000	12,800	4,150	3,510	4,940
29	3,760	10,200	9,010	7,410	-	9,270	18,800	19,800	14,500	4,370	3,620	4,820
30	3,760	15,400	7,710	6,570	-	10,400	20,900	19,800	13,600	4,940	3,020	4,590
31	3,960	-	6,700	6,170	-	12,800	-	23,200	-	4,370	2,820	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....		116,180	9,000	2,460	3,748	0.392	0.45
November.....		132,080	15,400	2,460	4,403	.460	.51
December.....		215,350	11,200	1,660	6,947	.726	.84
Calendar year 1940.....		4,296,590	53,500	1,500	11,740	1.23	16.69
January.....		189,230	10,100	3,310	6,140	.638	.74
February.....		159,130	7,260	5,050	5,663	.594	.72
March.....		261,890	12,800	6,420	8,442	.882	1.02
April.....		446,300	20,900	11,600	14,880	1.55	1.73
May.....		769,800	37,400	19,800	24,830	2.59	2.99
June.....		578,600	28,800	12,000	19,280	2.01	2.24
July.....		197,800	12,000	3,930	6,381	.667	.77
August.....		92,890	3,930	2,370	2,996	.313	.36
September.....		152,950	9,010	2,920	5,098	.533	.59
Water year 1940-41.....		3,311,900	37,400	1,660	9,074	.948	12.86

e Fragmentary gage-height record; discharge computed on basis of partial record and records for other stations in the basin.

Note.- Discharge Oct. 28 to Nov. 19, Mar. 15-29, June 16-20 computed from staff-gage readings at Spalding bridge, 2,300 feet upstream from recorder.



## Lochsa River near Lowell, Idaho

Location.- Water-stage recorder, lat. 46°09', long. 115°35', in SW¼SE¼ sec. 33, T. 33 N., R. 7 E., three-quarters of a mile upstream from Lowell post office, seven-eighths of a mile upstream from mouth, and 1¼ miles downstream from Pete King Creek.

Drainage area.- 1,180 square miles.

Records available.- November 1910 to August 1912 (gage-height record only), October 1929 to September 1941.

Average discharge.- 12 years (1929-41) 2,395 second-feet.

Extremes.- Maximum discharge during year, 9,850 second-feet May 13 (gage height, 6.82 feet); minimum, 317 second-feet Dec. 14 (gage height, 1.33 feet).  
1929-41: Maximum discharge, 54,800 second-feet June 10, 1933 (gage height, 13.44 feet), from rating curve extended above 25,000 second-feet; minimum, probably less than 100 second-feet Jan. 8, 1937, during period of ice effect.

Remarks.- Records excellent. No diversion.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(shifting-control method used May 13 to Sept. 30)

1.3	301	2.4	1,180	4.2	3,750
1.5	415	2.7	1,520	5.0	5,350
1.8	625	3.0	1,900	5.8	7,240
2.1	880	3.4	2,450	6.6	9,310

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	730	764	995	602	618	956	2,520	5,800	6,150	2,170	714	515
2	641	817	928	501	667	1,150	2,830	6,270	5,570	2,030	891	494
3	1,080	817	966	487	641	1,190	2,910	6,390	4,920	1,960	649	508
4	1,000	697	1,360	610	1,180	2,750	6,030	4,920	1,820	618	641	
5	826	625	1,320	730	595	1,130	2,530	6,030	4,920	1,680	595	1,000
6	689	572	1,270	739	588	1,110	2,680	5,130	4,410	1,670	572	1,280
7	595	657	1,130	714	595	1,080	2,450	4,410	4,310	1,680	550	1,120
8	536	739	1,020	687	602	1,080	2,380	4,310	4,610	1,640	529	918
9	501	722	995	625	633	1,130	2,390	3,930	4,310	1,420	529	862
10	474	673	899	588	649	1,090	2,450	3,840	3,840	1,560	536	1,020
11	454	565	722	565	681	1,040	2,680	4,310	3,570	1,270	522	937
12	441	467	543	558	730	985	2,600	5,680	3,400	1,210	543	908
13	454	397	391	595	697	928	2,680	5,770	3,230	1,170	565	1,360
14	497	409	339	665	649	880	2,600	7,990	3,400	1,120	550	1,400
15	480	487	415	657	610	908	2,600	6,270	2,990	1,080	515	1,960
16	460	529	595	610	595	956	2,520	5,890	2,830	995	515	1,960
17	441	529	825	595	572	985	2,380	6,030	2,750	956	608	1,630
18	422	602	808	756	602	1,120	2,240	6,030	3,070	956	474	1,510
19	409	588	899	562	618	1,160	2,170	5,020	3,320	918	441	1,590
20	403	494	817	817	610	1,150	2,100	4,510	3,660	871	434	1,470
21	428	494	853	773	618	1,150	2,100	4,310	3,150	826	467	1,380
22	448	508	844	730	618	1,150	2,170	4,410	2,750	782	467	1,270
23	422	448	826	697	641	1,190	2,380	4,610	2,450	739	474	1,180
24	422	474	817	899	705	1,150	2,680	4,920	2,310	714	515	1,110
25	588	508	799	689	714	1,160	2,910	5,680	2,240	756	494	1,040
26	602	529	782	764	649	1,210	3,070	5,240	2,100	862	480	1,020
27	610	522	844	730	649	1,340	3,400	4,920	2,030	790	633	1,200
28	595	602	817	689	705	1,510	3,840	4,410	2,600	826	665	1,200
29	572	1,640	756	649	-	1,700	4,120	4,020	2,520	946	543	1,110
30	588	1,360	697	825	-	2,170	4,710	4,410	2,350	599	508	1,090
31	673	-	714	618	-	2,380	-	4,710	-	773	529	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	17,451	1,060	403	563	0.477	0.55	34,610
November.....	12,235	1,640	397	641	.543	.61	38,150
December.....	25,686	1,360	339	829	.703	.81	50,950
Calendar year 1940.....	797,437	12,400	249	2,179	1.85	25.14	1,582,000
January.....	20,601	862	487	665	.564	.65	40,860
February.....	17,881	730	572	638	.541	.56	35,410
March.....	37,298	2,380	580	1,203	1.02	1.18	75,980
April.....	82,130	4,710	2,100	2,738	2.32	2.59	162,900
May.....	164,070	8,770	3,840	5,293	4.49	5.18	325,400
June.....	104,610	6,150	2,030	3,487	2.96	3.30	207,500
July.....	36,769	2,170	714	1,186	1.01	1.16	72,930
August.....	16,815	714	434	542	.459	.53	33,350
September.....	34,673	1,960	494	1,156	.980	1.09	68,770
Water year 1940-41.....	577,189	8,770	339	1,581	1.34	18.21	1,145,000

## CLEARWATER RIVER BASIN

South Fork of Clearwater River near Grangeville, Idaho

Location.- Staff gage, lat. 45°55', long. 116°01', in SE¼NW¼ sec. 30, T. 30 N. R. 4 E., just downstream from power house of Washington Water Power Co., 6 miles southeast of Grangeville.

Drainage area.- 865 square miles.

Records available.- November 1910 to September 1916, April 1923 to September 1941.

Average discharge.- 22 years (1912-16, 1923-41), 787 second-feet.

Extremes.- Maximum discharge observed during year, 3,910 second-feet June 8 (gage height, 7.30 feet); minimum daily discharge, 125 second-feet Dec. 13.  
1910-16, 1923-41: Maximum discharge observed, 9,830 second-feet May 30, 1912 (gage height, 9.7 feet), from rating curve extended above 6,500 second-feet; practically no flow for parts of Aug. 24, 26, 1935.

Remarks.- Records good except those for periods of ice effect or missing or non-representative gage heights, which are fair. Diurnal fluctuations caused by power plant just above station. No diversion for irrigation. Gage read twice daily.

Cooperation.- Gage-height record furnished by Washington Water Power Co. in connection with a Federal Power Commission project.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

2.7	118	3.3	307	4.1	706	5.3	1,600	6.5	2,840
2.9	169	3.5	394	4.5	960	5.7	1,970	6.9	3,350
3.1	232	3.8	541	4.9	1,260	6.1	2,380	7.2	3,770

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	418	236	418	219	193	341	980	1,340	2,170	1,280	352	246
2	307	272	362	169	193	490	1,100	1,690	1,880	1,150	a316	246
3	796	345	349	b150	172	490	1,340	1,600	1,780	1,150	a300	236
4	d765	324	385	b200	190	466	1,180	1,690	1,690	1,180	284	276
5	516	257	394	254	164	441	1,100	1,690	1,780	a1,100	261	341
6	390	257	441	315	178	441	1,100	1,600	1,600	a1,010	243	372
7	307	257	394	324	193	418	1,030	1,420	2,270	926	229	a376
8	268	257	358	261	181	418	926	1,420	3,770	592	212	380
9	236	288	394	232	181	466	860	1,420	3,220	796	a201	341
10	212	264	311	225	187	418	1,030	1,260	2,720	736	a139	418
11	206	219	232	225	190	394	1,180	1,340	2,270	706	178	418
12	190	209	169	225	219	341	1,260	1,510	2,270	a660	199	345
13	193	193	*b125	232	199	394	1,100	1,970	2,070	a614	272	a369
14	246	b200	b175	246	193	291	1,180	1,690	2,490	565	229	a394
15	222	b220	b250	219	147	324	1,180	1,510	2,070	541	187	418
16	202	232	b275	199	158	367	1,100	1,340	1,880	490	a177	466
17	190	257	b300	193	169	376	1,030	1,510	1,880	490	a168	441
18	178	280	b350	225	169	490	1,030	1,600	2,070	466	158	367
19	169	254	b350	232	193	490	926	1,510	2,490	a450	d150	466
20	166	222	b350	246	199	490	926	1,420	3,220	a434	d150	a466
21	172	236	b340	254	187	441	926	1,420	2,600	418	d175	a466
22	206	232	b330	222	193	441	892	1,420	a2,340	390	d200	466
23	209	202	320	206	199	466	926	1,420	2,070	372	d250	441
24	187	212	291	193	212	441	1,030	1,420	1,880	349	a300	345
25	196	232	a288	212	212	441	1,030	1,780	1,780	332	288	332
26	276	236	294	212	196	490	1,030	1,510	1,890	a400	257	307
27	272	222	276	193	193	541	1,100	1,690	1,510	a400	394	a314
28	257	225	254	187	239	594	1,100	1,600	1,600	394	354	a321
29	236	303	239	166	-	649	1,180	1,510	1,610	568	324	328
30	229	541	212	164	-	827	1,180	1,510	1,540	418	299	291
31	232	-	229	164	-	960	-	1,690	-	349	a272	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	8,639	796	166	279	0.323	0.37	17,140
November.....	7,684	541	193	256	.296	.33	15,240
December.....	9,445	441	125	305	.353	.41	18,730
Calendar year 1940.....	226,185	2,720	76	618	.714	9.74	448,700
January.....	6,784	324	150	218	.252	.29	13,420
February.....	5,299	239	147	189	.218	.23	10,510
March.....	14,637	960	291	472	.546	.63	29,030
April.....	31,932	1,340	860	1,064	1.23	1.37	63,340
May.....	47,500	1,970	1,260	1,532	1.77	2.04	94,210
June.....	63,910	3,770	1,340	2,130	2.46	2.74	126,800
July.....	20,069	1,260	332	647	.748	.86	39,810
August.....	7,545	394	150	243	.281	.32	14,970
September.....	10,993	466	236	366	.423	.47	21,800
Water year 1940-41.....	234,420	3,770	125	642	.742	10.06	465,000

\* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated or computed on basis of records for nearby stations.

b Gage height not representative of mean for the day; discharge interpolated or computed on basis of records for nearby stations.

## North Fork of Clearwater River near Ahsahka, Idaho

Location.- Water-stage recorder, lat. 46°31', long. 116°18', in SE¼ sec. 26, T. 37 N., R. 1 E., at Bruce's Eddy, 1½ miles northeast of Ahsahka and 2 miles upstream from mouth.

Drainage area.- 2,440 square miles.

Records available.- August 1926 to September 1941.

Average discharge.- 15 years, 5,277 second-feet.

Extremes.- Maximum discharge during year, 12,200 second-feet May 18 (gage height, 10.98 feet); minimum discharge recorded, 882 second-feet Dec. 14 (gage height, 2.35 feet) but may have been less Dec. 15 or 16 during period of no gage-height record.

1926-41: Maximum discharge, 100,000 second-feet Dec. 23, 1933 (gage height, 35.5 feet, from floodmarks), from rating curve extended above 24,000 second-feet by logarithmic plotting; minimum, probably less than 250 second-feet Jan. 8, 1937, during period of ice effect.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. No diversions or regulation above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1 to Nov. 29)

2.5	965	4.0	2,080	6.0	4,430	8.5	7,970
2.8	1,150	4.4	2,480	6.5	5,080	9.0	8,770
3.1	1,350	4.8	2,920	7.0	5,780	9.5	9,600
3.4	1,570	5.2	3,400	7.5	6,480	10.0	10,450
3.7	1,810	5.6	3,910	8.0	7,210	10.5	11,350

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,570	2,080	3,520	2,760	2,700	3,280	5,640	8,770	9,600	3,520	1,380	1,320
2	1,490	2,080	2,700	2,130	2,640	4,950	6,200	9,940	9,770	3,400	1,420	1,250
3	2,220	2,180	2,760	1,650	2,590	5,640	6,620	9,430	8,770	3,280	1,380	1,250
4	3,100	1,900	3,100	1,750	2,430	5,220	6,480	9,090	8,290	3,040	1,350	1,460
5	2,080	1,610	3,280	2,080	2,280	4,950	6,340	10,400	7,810	2,860	1,320	1,990
6	1,570	1,490	3,650	2,330	2,180	4,690	6,340	10,300	7,360	2,700	1,280	1,860
7	1,320	1,460	3,400	2,280	2,230	4,430	5,780	8,610	7,060	2,590	1,250	1,900
8	1,180	2,080	2,860	2,180	2,280	4,300	5,360	8,130	7,660	2,540	1,220	1,650
9	1,120	2,080	2,760	1,940	2,280	4,300	5,360	7,810	7,360	2,380	1,220	1,420
10	1,080	1,810	2,640	1,810	2,380	4,170	5,360	7,360	6,480	2,280	1,250	1,690
11	1,080	1,610	2,180	1,690	2,860	3,910	6,060	7,360	6,080	2,230	1,250	1,770
12	1,220	1,420	1,870	1,610	2,980	3,650	6,200	5,130	5,780	2,180	1,220	1,610
13	1,250	1,250	1,120	1,650	2,920	3,400	6,060	9,600	5,800	2,080	1,280	2,430
14	1,220	1,080	995	1,940	2,700	3,100	6,060	10,400	5,500	2,040	1,350	2,860
15	1,180	1,150		1,990	2,540	3,040	5,780	9,260	5,220	1,940	1,280	3,040
16	1,080	1,280	al, 000	2,080	2,380	3,040	5,640	8,450	4,950	1,900	1,220	3,650
17	1,080	1,250		1,990	2,280	2,980	5,220	9,940	4,950	1,810	1,250	2,590
18	1,020	1,420		2,380	2,280	3,280	4,950	11,200	5,080	1,770	1,180	2,130
19	995	1,420		3,520	2,230	3,520	4,690	9,430	5,600	1,770	1,120	1,990
20	965	1,320	2,480	3,520	2,230	3,400	4,560	8,450	5,780	1,690	1,120	2,080
21	965	1,180	4,300	3,520	2,230	3,280	4,560	7,810	5,080	1,650	1,080	1,860
22	1,020	1,220	4,300	2,920	2,180	3,280	4,690	7,660	4,560	1,570	1,120	1,770
23	1,060	1,220	4,040	2,700	2,180	3,280	4,950	7,610	4,170	1,530	1,150	1,650
24	1,060	1,080	3,910	2,640	2,330	3,280	5,220	7,660	3,910	1,530	1,250	1,570
25	1,350	1,180	4,040	2,810	2,430	3,160	5,640	7,810	3,910	1,490	1,260	1,530
26	1,610	1,250	4,300	4,040	2,330	3,400	5,780	7,610	3,780	1,530	1,150	1,490
27	1,570	1,280	5,220	4,170	2,180	3,650	6,200	7,510	3,520	1,570	1,260	1,630
28	1,570	1,380	5,080	3,650	2,380	4,040	6,910	7,210	4,170	1,570	1,530	1,670
29	1,420	3,760	4,170	3,280	-	4,300	7,060	6,620	4,560	1,810	1,380	1,490
30	1,650	5,640	3,520	2,920	-	4,820	7,510	6,910	3,910	1,860	1,180	1,420
31	1,860	-	3,100	2,700	-	5,360	-	8,930	-	1,570	1,220	-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off Inches	Run-off Acre-feet
October.....	42,915	3,100	965	1,384	0.567	0.65	85,120
November.....	51,230	5,640	1,080	1,708	.700	.78	101,600
December.....	89,895	6,220	-	2,900	1.19	1.37	178,300
Calendar year 1940.....	1,610,766	16,400	-	4,401	1.80	24.55	3,195,000
January.....	78,250	4,170	1,610	2,524	1.03	1.19	155,200
February.....	67,630	2,980	2,180	2,415	.990	1.03	134,100
March.....	121,100	5,640	2,980	3,906	1.60	1.84	240,200
April.....	173,220	7,510	4,560	5,774	2.37	2.64	343,600
May.....	268,200	11,200	6,620	8,555	3.51	4.05	526,000
June.....	176,050	9,770	3,520	5,868	2.40	2.68	349,200
July.....	55,220	3,520	1,490	2,119	.868	1.00	130,300
August.....	38,900	1,420	1,080	1,255	.614	.59	77,160
September.....	55,820	3,650	1,250	1,661	.763	.85	110,700
Water year 1940-41.....	1,225,890	11,200	-	3,359	1.38	18.67	2,431,000

a No gage-height record; discharge interpolated or computed on basis of records for Clearwater River at Kamiah and Spalding.

## CLEARWATER RIVER BASIN

## Mission Creek near Winchester, Idaho

Location.- Water-stage recorder, lat. 46°11', long. 116°39', in NE¼ sec. 24, T. 33 N., R. 3 W., about 4 miles southwest of Winchester.

Records available.- December 1940 to September 1941.

Extremes.- Maximum discharge during period, 128 second-feet Feb. 27 (gage height, 2.79 feet), from rating curve extended above 25 second-feet; minimum not determined, probably occurred during periods of ice effect.

Remarks.- Records good except those for Dec. 11 to Feb. 26, which are poor. No diversion or regulation.

Cooperation.- Records collected in cooperation with Bureau of Reclamation which organization also furnished results of 10 discharge measurements.

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					(*)	34	9.4	6.6	27	17	1.4	0.8
2						24	22	5.9	20	16	1.2	.8
3						16	16	7.2	22	15	1.2	.8
4						12	13	6.6	17	16	1.1	.8
5						10	13	12	15	12	1.1	.9
6					b1.5	9.8	11	7.9	14	9.8	.9	.9
7						9.4	9.8	7.2	37	9.4	.8	.6
8						9.8	8.9	12	49	7.9	.8	.6
9						8.5	8.9	7.5	28	6.9	.8	.6
10						7.9	18	6.3	21	6.3	.8	.6
11			(*)		b1.0	7.5	24	5.3	18	5.6	.8	.6
12						b5.5	18	5.3	16	5.1	1.1	.8
13						b5.5	15	7.2	18	4.6	1.0	.9
14						*b5.0	13	5.6	14	4.2	.8	.8
15						*b5.0	12	4.9	19	3.8	.7	1.5
16					b2.5	5.6	11	5.1	17	3.5	.7	1.0
17			(*)			6.3	11	9.4	29	3.1	.6	.7
18						6.9	9.4	7.5	27	3.0	.6	1.0
19						6.3	8.2	5.6	54	3.0	.6	1.8
20						5.9	7.5	5.1	29	4.4	.6	1.3
21						5.6	6.9	4.6	22	2.7	.6	1.0
22						6.6	6.3	4.2	18	2.4	.5	.8
23						7.2	5.9	3.8	16	2.3	.6	.8
24					b6.0	5.9	5.9	3.8	14	2.1	.7	.7
25						5.6	5.6	4.2	13	1.8	.8	.6
26					b2.0	6.3	5.1	4.0	12	1.7	1.3	.7
27						6.6	6.3	7.2	11	2.0	1.5	.8
28					22	45	4.9	5.9	22	3.1	1.2	.7
29					-	8.2	4.4	8.5	67	2.3	1.0	.6
30					-	17	4.2	27	22	1.6	2.0	.7
31					-	11	-	28	-	1.6	1.0	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						-	-	-	-	-		
November.....						-	-	-	-	-		
December 11-31 .....						45.0	-	-	2.14	89		
Calendar year .....						-	-	-	-	-		
January.....						42.0	-	-	-	1.35	83	
February.....						143.0	45	-	-	5.11	284	
March.....						287.5	34	5.0	-	9.27	570	
April.....						314.6	24	4.2	-	10.5	624	
May.....						241.4	28	3.8	-	7.79	479	
June.....						708	67	11	-	23.6	1,400	
July.....						179.9	17	1.5	-	5.80	357	
August.....						28.8	2.0	.5	-	.93	57	
September.....						25.1	1.8	.6	-	.84	50	
The period.....						-	-	-	-	3,980		

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

South Fork of Palouse River at Pullman, Wash.

Location.- Water-stage recorder and 6-foot Cippoletti weir in low overflow dam, lat. 46° 43'50", long. 117°11'00", in NE¼ sec. 6, T. 14 N., R. 45 E., at State Street crossing in Pullman, 600 feet upstream from Missouri Flat Creek.

Drainage area.- 132 square miles.

Records available.- February 1934 to September 1941.

Extremes.- Maximum discharge during year, 785 second-feet Jan. 18 (gage height, 3.99 feet); minimum, 1.0 second-foot Aug. 3, but may have been less during period of faulty gage-height record, Aug. 4 to Sept. 12.  
1934-41: Maximum discharge, 968 second-feet Mar. 21, 1939 (gage height, 4.01 feet); minimum, 0.23 second-foot Oct. 26, 1938.

Remarks.- Records good except those for period of faulty gage-height record, which are poor. No large diversions. Slight regulation caused by pondage at Robinson Park Dam in headwaters and by Moscow sewage-disposal plant on Paradise Creek.

Rating tables, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

Oct. 1-3			Oct. 3 to Sept. 30					
0.95	1.8		0.6	1.2	1.2	12	2.2	123
1.00	2.1		.7	2.3	1.4	17	2.5	203
1.05	2.4		.8	3.7	1.6	27	2.8	298
1.10	2.8		.9	5.4	1.8	48	3.1	406
			1.0	7.4	2.0	79	3.4	523

Discharge, in second-feet, water year October 1940 to September 1941

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	8.2	49	32	79	104	15	13	28	17	1.1	
2	1.8	6.8	37	30	112	120	63	16	16	11	1.1	
3	11	5.2	26	22	74	79	81	14	13	9.1		
4	15	3.9	23	20	66	93	49	15	10	6.0		
5	9.1	3.9	a21	19	55	59	33	47	6.8	7.0		
6	4.2	4.4	a19	20	57	49	23	23	13	5.6		e1.5
7	2.5	4.7	a17	22	70	45	20	15	37	4.7		
8	1.8	7.2	14	24	55	43	18	15	61	4.4		
9	1.7	11	11	24	60	32	13	15	27	3.4		
10	1.5	a11	5.5	27	100	31	103	11	18	3.1		
11	1.5	a9	7.2	34	115	31	306	9.1	14	3.1		
12	1.8	a7	5.8	36	98	25	93	8.2	11	3.2		
13	1.7	a6	4.7	36	59	22	65	16	9.5	3.4		2.3
14	1.5	a5	4.2	101	56	22	48	22	5.6	3.5		1.6
15	1.5	a4	3.9	99	50	22	38	13	14	3.4		1.8
16	1.5	3.2	3.5	74	55	20	32	11	11	3.1		1.7
17	1.5	3.9	3.5	77	42	19	31	155	11	3.1	e1.1	1.5
18	1.5	3.9	5.2	473	42	19	28	101	18	3.2		2.0
19	1.4	3.5	12	498	43	19	24	36	16	3.2		2.8
20	1.4	3.4	221	249	39	18	22	26	17	3.4		2.0
21	1.7	3.5	240	180	37	16	20	21	10	3.4		1.9
22	1.7	3.1	83	142	34	25	18	17	7.5	2.8		1.7
23	1.6	3.1	95	140	33	58	17	15	6.4	2.7		1.6
24	3.0	3.4	111	166	56	27	16	13	5.2	2.7		1.4
25	4.0	4.4	242	246	68	22	14	11	5.1	2.7		1.4
26	2.7	5.6	166	248	52	20	14	13	4.5	2.7		1.3
27	7.9	11	349	142	42	18	14	18	4.2	2.7		1.3
28	6.2	75	150	118	69	16	12	20	11	2.7		1.4
29	4.8	269	106	93	-	15	10	24	100	2.0		1.4
30	7.0	92	72	83	-	14	9.7	45	40	1.4		1.5
31	7.6	-	59	77	-	15	-	51	-	1.2		-

Month	Second-foot-days	Maximum	Minimum	Mean	Per square mile	Run-off	
						Inches	Acres-feet
October.....	114.7	15	1.4	3.70	0.028	0.032	228
November.....	585.3	269	3.1	19.5	.148	.165	1,160
December.....	2,169.5	349	3.5	70.0	.530	.611	4,300
Calendar year 1940.....	10,027.67	380	.39	27.4	.208	2.825	19,890
January.....	3,552	498	19	115	.871	1.00	7,050
February.....	1,717	115	33	61.3	.464	.454	3,410
March.....	1,115	120	14	36.1	.273	.315	2,220
April.....	1,254.7	306	9.7	41.8	.317	.354	2,490
May.....	832.3	155	8.2	26.8	.203	.234	1,650
June.....	556.1	100	4.2	18.5	.140	.157	1,100
July.....	132.9	17	1.2	4.29	.032	.037	264
August.....	34.0	-	-	1.10	.0083	.010	67
September.....	48.6	2.8	-	1.62	.012	.014	96
Water year 1940-41.....	12,115.1	498	-	33.2	.252	3.413	24,040

a No gage-height record; discharge computed on basis of rainfall records at Pullman.

e Intake action faulty; discharge determined on basis of records for Asotin Creek near Asotin.

Note.- A 2-foot Cippoletti weir, inserted in 6-foot opening, was used as control Oct. 1-3 (7:45 a.m.) and discharge for this period was computed by use of weir formula.

In addition to the records of stream flow obtained at gaging stations in the Snake River Basin and reported in the preceding pages, measurements of flow were made at other points, as shown in the following table:

Miscellaneous discharge measurements in Snake River Basin during water year  
October 1940 to September 1941

Mud Lake Basin, Idaho				
Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
May 16	Beaver Creek.....	Mud Lake.....	Sec. 14, T. 12 N., R. 36 E., 400 feet below railroad crossing and 1.2 miles north of Spencer.	57.7

Tributaries between Portneuf River and Salmon Falls Creek, Idaho

Oct. 21	Blue Lakes outlet	Snake River.....	SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 9 S., R. 17 E., at mouth, 4 miles north of Twin Falls, Idaho.	231
Dec. 15	....do.....	....do.....	....do.....	207
Mar. 26	....do.....	....do.....	....do.....	198
May 15	....do.....	....do.....	....do.....	201
July 2	....do.....	....do.....	....do.....	189
Aug. 2	....do.....	....do.....	....do.....	195
Sept. 17	....do.....	....do.....	....do.....	220
Apr. 9	Box Canyon Springs.	....do.....	NW $\frac{1}{4}$ sec. 27, T. 8 S., R. 14 E., 600 feet below Idaho Power Co. flume, 0.8 mile above mouth, and 7 miles southwest of Wendell.	300
10	....do.....	....do.....	NW $\frac{1}{4}$ sec. 28, T. 8 S., R. 14 E., 0.3 mile above mouth, 7 $\frac{1}{2}$ miles southwest of Wendell.	496

Big Wood River Basin, Idaho

Oct. 12	Broadford Slough.	Big Wood River.....	Sec. 26, T. 2 N., R. 18 E., 100 feet below diversion No. 35, 1 $\frac{1}{2}$ miles northwest of Bellevue.	3.72
July 15	....do.....	....do.....	....do.....	5.88
Aug. 20	....do.....	....do.....	....do.....	13.3
Sept. 26	....do.....	....do.....	....do.....	3.63
Oct. 8	Rockwell bypass canal.	Broadford Slough....	Sec. 22, T. 2 N., R. 18 E., at head, 2 miles southeast of Hailey.	3.64
12	....do.....	....do.....	....do.....	10.7
July 15	....do.....	....do.....	....do.....	15.6
Aug. 20	....do.....	....do.....	....do.....	15.0
Sept. 26	....do.....	....do.....	....do.....	5.58
Oct. 12	....do.....	....do.....	Sec. 22, T. 2 N., R. 18 E., 50 feet below wasteway and 2.1 miles southeast of Hailey.	*.02
12	....do.....	....do.....	Sec. 26, T. 2 N., R. 18 E., at outlet, 1 $\frac{1}{2}$ miles northwest of Bellevue.	0
July 15	....do.....	....do.....	....do.....	7.56
Aug. 20	....do.....	....do.....	....do.....	14.4
Sept. 26	....do.....	....do.....	....do.....	4.33
Oct. 8	Rockwell bypass canal wasteway.	Rockwell bypass canal.	Sec. 22, T. 2 N., R. 18 E., about 800 feet below canal heading and 2.1 miles southeast of Hailey.	2.60
July 15	Diversion No. 34.	....do.....	Sec. 22, T. 2 N., R. 18 E., 200 feet below wasteway and 2.1 miles southeast of Hailey.	4.41
Aug. 20	....do.....	....do.....	....do.....	.18
Sept. 26	....do.....	....do.....	....do.....	.10
July 15	Diversion No. 34-A.	....do.....	Sec. 22, T. 2 N., R. 18 E., at head-gate, 2.6 miles southeast of Hailey	0
Aug. 20	....do.....	....do.....	....do.....	1.03
Sept. 26	....do.....	....do.....	....do.....	1.02
July 15	Diversion No. 34-B.	....do.....	Sec. 27, T. 2 N., R. 18 E., at head-gate, 2 miles northwest of Bellevue	3.21
Aug. 20	....do.....	....do.....	....do.....	0
Sept. 26	....do.....	....do.....	....do.....	.69
Oct. 12	Diversion No. 36.	Broadford Slough....	Sec. 26, T. 2 N., R. 18 E., at head-gate, 1 $\frac{1}{2}$ miles northwest of Bellevue.	*.02
July 15	....do.....	....do.....	....do.....	1.20
Aug. 20	....do.....	....do.....	....do.....	.30
Sept. 26	....do.....	....do.....	....do.....	.37

\* Estimated.

† Float measurement.

Tributaries between Big Wood and Owyhee Rivers, Idaho

Nov. 2	Ake lateral No. 2	Mountain Home feeder canal.	Sec. 36, T. 2 S., R. 6 E., at head, 5 miles north of Mountain Home.	*.40
29	....do.....	....do.....	....do.....	.45
Jan. 14	....do.....	....do.....	....do.....	*.20
Feb. 15	....do.....	....do.....	....do.....	*.20
20	....do.....	....do.....	....do.....	*.10
May 26	....do.....	....do.....	....do.....	*2.0
June 28	....do.....	....do.....	....do.....	2.19
July 28	....do.....	....do.....	....do.....	2.33
Aug. 27	....do.....	....do.....	....do.....	1.19

\* Estimated.

Miscellaneous discharge measurements in Snake River Basin during water year  
October 1940 to September 1941--Continued  
Malheur River Basin, Oreg.

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
May 21	Malheur River.....	Snake River.....	Sec. 8, T. 19 S., R. 34 E., above Bronson Ranch, near Drewsey.	184
July 15	.....do.....	.....do.....	.....do.....	36.2
23	.....do.....	.....do.....	.....do.....	26.3
14	.....do.....	.....do.....	Sec. 4, T. 20 S., R. 34 E.....	28.3
23	.....do.....	.....do.....	.....do.....	21.0
May 10	.....do.....	.....do.....	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 20 S., R. 34 E., above Drewsey Reclamation Co.'s ditch.	418
July 22	Lake Creek.....	Malheur River.....	Sec. 9, T. 16 S., R. 33 $\frac{1}{2}$ E.....	6.7
Feb. 23	Warm Springs Creek.	Agency Valley Reser- voir, North Fork of Malheur River.	SE $\frac{1}{4}$ sec. 1, T. 19 S., R. 37 E., at road crossing above Agency Valley Reservoir, near Beulah.	24.6
Apr. 9	.....do.....	.....do.....	.....do.....	65.4
May 22	.....do.....	.....do.....	.....do.....	4.32

## Weiser River Basin, Idaho

Apr. 24	Weiser River.....	Snake River.....	Sec. 2, T. 19 N., R. 1 W., below Price Valley damsite, $\frac{3}{4}$ miles northwest of Tamarack.	66.1
May 24	.....do.....	.....do.....	.....do.....	17.7
June 26	.....do.....	.....do.....	.....do.....	20.3
July 27	.....do.....	.....do.....	.....do.....	7.98
Sept. 5	.....do.....	.....do.....	.....do.....	5.75
Apr. 11	North Fork of Hornet Creek.	Hornet Creek.....	Sec. 14, T. 17 N., R. 2 W., $\frac{1}{2}$ mile above mouth and $\frac{5}{8}$ miles west of Fruitvale.	68.7
May 21	.....do.....	.....do.....	.....do.....	3.88
June 23	.....do.....	.....do.....	.....do.....	5.97
July 26	.....do.....	.....do.....	.....do.....	.44
Aug. 30	.....do.....	.....do.....	.....do.....	.24
May 9	Johnson Creek.....	Weiser River.....	SE $\frac{1}{4}$ sec. 36, T. 17 N., R. 3 W., above mouth of Johnson Park Creek, 10 miles northwest of Council.	28.4
June 7	.....do.....	.....do.....	.....do.....	39.2
24	.....do.....	.....do.....	.....do.....	9.20
Mar. 7	Johnson Park Creek.	Johnson Creek.....	SE $\frac{1}{4}$ sec. 36, T. 17 N., R. 3 W., at mouth, 10 miles northwest of Council.	1.62
July 25	.....do.....	.....do.....	.....do.....	.73
Sept. 1	.....do.....	.....do.....	.....do.....	.28
Apr. 8	Camp Creek.....	Pine Creek.....	Sec. 32, T. 15 N., R. 3 W., at Raney Ranch near Horse Flat damsite, $2\frac{1}{2}$ miles northwest of Cambridge.	2.97
May 17	.....do.....	.....do.....	.....do.....	*.05
Apr. 19	Grays Creek.....	Little Weiser River.	Sec. 25, T. 15 N., R. 1 W., at Cole Ranch, 3 miles southeast of Mesa.	10.4
May 19	.....do.....	.....do.....	.....do.....	10.0
June 21	.....do.....	.....do.....	.....do.....	3.69
July 24	.....do.....	.....do.....	.....do.....	.46
Aug. 29	.....do.....	.....do.....	.....do.....	.25
Apr. 19	Grays Creek ditch.	Grays Creek.....	.....do.....	1.62
May 19	.....do.....	.....do.....	.....do.....	1.86
June 21	.....do.....	.....do.....	.....do.....	3.84
July 24	.....do.....	.....do.....	.....do.....	1.91
Aug. 29	.....do.....	.....do.....	.....do.....	.71
Apr. 17	South Fork of Crane Creek.	Crane Creek.....	Sec. 3, T. 11 N., R. 2 W., at bridge near South Crane school, 14 miles southeast of Midvale.	1.17
May 17	.....do.....	.....do.....	.....do.....	*.2
June 20	.....do.....	.....do.....	.....do.....	3.81
July 17	.....do.....	.....do.....	.....do.....	0
Aug. 28	.....do.....	.....do.....	.....do.....	0
Apr. 15	Monroe Creek.....	Weiser River.....	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 34, T. 12 N., R. 5 W., at bridge on farm road 200 feet west of U. S. Highway 95, 6 miles north of Weiser.	18.6
May 17	.....do.....	.....do.....	.....do.....	1.69
June 18	.....do.....	.....do.....	.....do.....	1.07
July 18	.....do.....	.....do.....	.....do.....	.28
Aug. 28	.....do.....	.....do.....	.....do.....	*.30

\* Estimated.

## Salmon River Basin, Idaho

Jan. 26	Salmon River.....	Snake River.....	Sec. 22, T. 11 N., R. 14 E., 3.5 miles above Yankee Fork of Salmon River and 6 miles east of Stanley.	340
Apr. 11	Garden Creek.....	Salmon River.....	Sec. 32, T. 14 N., R. 19 E., 100 feet above 4th Street bridge in Challis.	2.57
May 24	Johnson Creek diversion.	Johnson Creek.....	Sec. 13, T. 14 N., R. 7 E., at diver- sion point of Johnson Creek-Dead- wood River transmountain diversion, 8 miles south of Landmark ranger station, and 10 miles southeast of Knox.	32.9

## MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Snake River Basin during water year  
October 1940 to September 1941--Continued

## Salmon River Basin, Idaho--Continued

Date	Stream	Tributary to or diverting from-	Locality	Discharge (sec.-ft.)
July 1	Johnson Creek diversion.	Johnson Creek.....	Sec. 13, T. 14 N., R. 7 E., at diver- sion point of Johnson Creek-Dead- wood River transmountain diversion, 8 miles south of Landmark ranger station, and 10 miles southeast of Knox.	6.62
Aug. 14	.....do.....	.....do.....	.....do.....	1.57
Oct. 24	Riordan Creek.....	.....do.....	Sec. 9, T. 18 N., R. 8 E., at high- way bridge, 1½ miles south of Johnson Creek ranger station, 4 miles south of Yellow Pine, Idaho	9.35
12	Mud Creek.....	Little Salmon River.	Sec. 9, T. 19 N., R. 1 E., 0.5 mile upstream from Little Mud Creek and 3¼ miles northeast of Tamarack.	1.9
Dec. 11	.....do.....	.....do.....	.....do.....	1.8
Jan. 30	.....do.....	.....do.....	.....do.....	2.3
Mar. 13	.....do.....	.....do.....	.....do.....	22
Apr. 24	.....do.....	.....do.....	.....do.....	48
May 24	.....do.....	.....do.....	.....do.....	8.7
June 26	.....do.....	.....do.....	.....do.....	9.2
July 27	.....do.....	.....do.....	.....do.....	3.6
Sept. 2	.....do.....	.....do.....	.....do.....	2.2

## Clearwater River Basin, Idaho

Mar. 15	Lapwai Creek.....	Clearwater River...	Sec. 14, T. 35 N., R. 4 W., 100 feet below county road bridge, 1,000 feet below Sweetwater Creek, at Sweetwater.	38.7
Apr. 28	.....do.....	.....do.....	.....do.....	36.9
May 26	.....do.....	.....do.....	.....do.....	36.2
June 30	.....do.....	.....do.....	.....do.....	210
July 31	.....do.....	.....do.....	.....do.....	9.60
Sept. 5	.....do.....	.....do.....	.....do.....	10.2
Mar. 15	Webb Creek.....	Sweetwater Creek...	Sec. 35, T. 35 N., R. 4 W., about 500 feet above mouth, 4 miles southwest of Sweetwater.	3.15
Apr. 28	.....do.....	.....do.....	.....do.....	3.45
May 26	.....do.....	.....do.....	.....do.....	3.36
June 30	.....do.....	.....do.....	.....do.....	28.1
July 31	.....do.....	.....do.....	.....do.....	1.21
Sept. 5	.....do.....	.....do.....	.....do.....	1.30



# INDEX

	Page		Page
Accuracy of field data and computed results.....	3-4	Blue Lakes outlet, Idaho, discharge measurements of.....	240
Acre-foot, definition of.....	1	Boise, Idaho, Boise River at.....	133
Agencies other than Geological Survey, records collected by.....	9	Cottonwood Gulch at.....	160
Agency Valley Reservoir, Oreg., contents of.....	155	Boise River at Boise, Idaho.....	133
Ahsahka, Idaho, North Fork of Clearwater River near.....	237	at Dowling Ranch, near Arrowrock, Idaho.....	132
Ake lateral No. 2, Idaho, discharge measurements of.....	240	at Notus, Idaho.....	134
Alturas Lake Creek near Obsidian, Idaho.....	209	diversions from.....	135
American Falls Reservoir at American Falls, Idaho.....	19-20	near Twin Springs, Idaho.....	130
Argora, Idaho, Medicine Lodge Creek near.....	64,65	South Fork of, near Lenox, Idaho.....	137
Arrowrock, Idaho, Arrowrock Reservoir at.....	131	Boise River Basin, Idaho, gaging-station records in.....	130-151
Boise River near.....	132	Boulder Creek near Tamarack, Idaho.....	222
Grouse Creek near.....	138	Box Canyon Springs, Idaho, discharge measurements of.....	240
Moore Creek near.....	142	Broadford Slough, Idaho, discharge measurements of.....	240
Arrowrock Reservoir, Idaho, Cottonwood Creek at.....	136	Bruneau, Idaho, Jacks Creek near.....	122
Arrowrock Reservoir at Arrowrock, Idaho.....	131	Wickahoney Creek near.....	121
Ashton, Idaho, Henrys Fork near.....	44	Burnt River near Hereford, Oreg.....	199
Asotin Creek near Asotin, Wash.....	231	Burnt River Basin, Oreg., gaging-station records in.....	198-199
Asotin Creek Basin, Wash., gaging-station record in.....	231	Caldwell, Idaho, Deer Flat Reservoir near.....	151
Banks, Idaho, South Fork of Payette River near.....	160	Camas, Idaho, Beaver Creek at.....	63
Bannock Creek near Idaho City, Idaho.....	145-146	Camas Creek at.....	60
Barber, Idaho, New York canal near.....	149	Camas Creek (Mud Lake Basin) at Camas, Idaho.....	60
Bear Creek near Wallowa, Oreg.....	230	at Eighteenmile Shearing Corral, near Kilgore, Idaho.....	59
Bear Valley Creek near Cape Horn, Idaho.....	215	Camas Creek (Big Wood River Basin) near Blaine, Idaho.....	104
Beaver Creek at Camas, Idaho.....	63	Cambridge, Idaho, Pine Creek near.....	191
at Dubois, Idaho.....	62	Rush Creek at.....	190
at Spencer, Idaho.....	61	Weiser River near.....	180
discharge measurements of.....	240	Camp Creek, Idaho, discharge measurements of.....	241
Bedford, Wyo., Strawberry Creek near.....	59	Cape Horn, Idaho, Bear Valley Creek near.....	215
Bellevue, Idaho, Big Wood River near.....	97	Middle Fork of Salmon River near.....	214
Bennett Creek near Bennett, Idaho.....	118	Carey, Idaho, Little Wood River near.....	108,109-110
Bennett, Idaho, Bennett Creek near.....	118	Cascade, Idaho, North Fork of Payette River at.....	170
Little Camas canal near.....	139	Catherine Creek near Union, Oreg.....	225
Boulah, Oreg., North Fork of Malheur River at.....	157	Challis, Idaho, Salmon River near.....	206
North Fork of Malheur River near.....	156	Chester, Idaho, Fall River near.....	53
Big Lost River at Howell Ranch, near Chilly, Idaho.....	69	Chilly, Idaho, Big Lost River near.....	69
below Mackay Reservoir, near Mackay, Idaho.....	74	Clarkston, Wash., Snake River near.....	33-34, pl.1,C
east channel of, above Mackay Reservoir, near Mackay, Idaho.....	70	Clayton, Idaho, Salmon River near.....	205
west channel of, above Mackay Reservoir, near Mackay, Idaho.....	71-72	Yankes Fork of Salmon River near.....	211
Big Lost River Basin, Idaho, gaging-station records in.....	69-77	Clear Creek at Lowman, Idaho.....	164
Big Wood River at Gooding, Idaho.....	100	Clearwater River at Kamiah, Idaho.....	233
at Bailey, Idaho.....	95-96	at Spalding, Idaho.....	234
below Magic Dam near Richfield, Idaho.....	99	North Fork of, near Ahsahka, Idaho.....	237
near Bellevue, Idaho.....	97	South Fork of, near Grangeville, Idaho.....	236
near Gooding, Idaho.....	101	Clearwater River Basin, Idaho, discharge measurements in.....	242
Big Wood River Basin, Idaho, discharge measurements in.....	240	gaging-station records in.....	232-238
gaging-station records in.....	95-114	Clover Creek near Bliss, Idaho.....	115
Big Wood Slough at Halley, Idaho.....	103	Computations, accuracy of, results of.....	3-4
Birch Creek near Downey, Idaho.....	80	Control, definition of.....	1
Blackfoot, Idaho, Blackfoot River near Snake River near.....	57	Cooperation, record of.....	10
Blackfoot River near Blackfoot, Idaho.....	57	Cottonwood Creek (Boise River Basin) at Arrowrock Reservoir, Idaho.....	136
Blackfoot River Basin, Idaho, gaging-station record in.....	57	Cottonwood Creek (Salt River Basin) near Smoot, Wyo.....	38
Blaine, Idaho, Camas Creek near.....	104	Cottonwood Gulch at Boise, Idaho.....	150
Blaine County Investment Co.'s canal near Howe, Idaho.....	68	Council, Idaho, East Fork of Weiser River near.....	182
Bliss, Idaho, Clover Creek near.....	116	Hornet Creek near.....	186
		Johnson Creek near.....	189
		Weiser River near.....	179
		Crane Creek at mouth, near Weiser, Idaho.....	195
		near Midvale, Idaho.....	194

	Page		Page
Crane Creek, Idaho, South Fork of, discharge measurements of.....	241	Hope, Oreg., Malheur River near.....	154
Crane Creek Reservoir near Midvale, Idaho.....	193	Horseshoe Bend, Idaho, Payette River near.....	161
Data, accuracy of.....	3-4	Howe, Idaho, Blaine County Investment Co.'s canal near.....	68
Deadwood Reservoir near Lowman, Idaho.....	1-3	Little Lost River near.....	67
Deadwood River below Deadwood Reservoir, near Lowman, Idaho.....	165	Hurricane Creek near Joseph, Oreg.....	228
Deer Flat Reservoir near Caldwell, Idaho.....	166	Idaho City, Idaho, Bannock Creek near.....	145-146
Downey, Idaho, Birch Creek near.....	167	Elk Creek near.....	148
Dubois, Idaho, Beaver Creek at.....	161	Gold Hill Placer diversion near.....	143
Drewsey, Oreg., Malheur River near.....	80	Granite Creek near.....	144
Elk Creek above Gold Hill Placer diver- sion near Idaho City, Idaho.....	162	Moore Creek near.....	140, 141
Emmett, Idaho, Payette River near.....	52	Pine Creek near.....	146-147
Fall River, diversions from, above gaging station near Squirrel, Idaho.....	50	Imaha River at Imaha, Oreg.....	202
between Squirrel and Chester gaging stations, Idaho.....	52	Imaha River Basin, Oreg., gaging- station record in.....	202
near Chester, Idaho.....	53	Indian Valley, Idaho, Little Weiser River near.....	192
near Squirrel, Idaho.....	51	Irwin, Idaho, Snake River near.....	13
Flat Creek near Jackson, Wyo.....	35	Island Park, Idaho, Henrys Fork near.....	42
Flat Creek Basin, Wyo., gaging-station records in.....	35	Island Park Reservoir near.....	41
Floods, special reports on.....	9	Island Park Reservoir near Island Park, Idaho.....	41
Fruitvale, Idaho, West Fork of Weiser River near.....	183	Jacks Creek near Bruneau, Idaho.....	122
Garden Creek, Idaho, discharge measure- ments of.....	241	Jackson, Wyo., Flat Creek near.....	35
Garden Valley, Idaho, South Fork of Payette River near.....	169	Jackson Lake at Moran, Wyo.....	11
Gardena, Idaho, Porter Creek near.....	176	Johnson Creek (Salmon River Basin) at Yellow Pine, Idaho.....	221
Glenns Ferry, Idaho, Little Canyon Creek near.....	117	diversion from, discharge measurement of.....	241
Gold Creek, Nev., Owyhee River near.....	124	Johnson Creek (Weiser River Basin) below Johnson Park, near Council, Idaho..	189
Wild Horse Reservoir near.....	123	discharge measurements of.....	241
Gold Hill Placer diversion from Moore Creek, near Idaho City, Idaho.....	143	Johnson Park Creek, Idaho, discharge measurements of.....	241
Gooding canal at Mioner, Idaho.....	88	Joseph, Oreg., East Fork of Wallowa River near.....	226
Gooding, Idaho, Big Wood River at.....	100	Hurricane Creek near.....	228
Big Wood River near.....	101	Wallowa Falls power-plant tailrace near.....	227
Thorn Creek spillway near.....	107	Kamiah, Idaho, Clearwater River at.....	233
Goose Creek above Trapper Creek, near Oakley, Idaho.....	83	Ketchum, Idaho, Warm Springs Creek at.....	102
Grassy Lake, Idaho, contents of.....	49	Kilgore, Idaho, Camas Creek near.....	59
Grays Creek ditch, Idaho, discharge measurements of.....	241	Kimberly, Idaho, Snake River near.....	116
Grays Creek, Idaho, discharge measure- ments of.....	241	King Hill, Idaho, King Hill Creek near.....	29, pl. 1, A
Grande Ronde River at La Grande, Oreg.. at Rondwa, Oreg.....	223 224	Snake River at.....	216
Grande Ronde River Basin, Oreg., gaging- station records in.....	223-250	Knox, Idaho, South Fork of Salmon River near.....	216
Grangeville, Idaho, South Fork of Clear- water River near.....	236	King Hill canal near Hagerman, Idaho.....	114
Granite Creek near Idaho City, Idaho.....	144	King Hill Creek near King Hill, Idaho..	116
Grouse Creek near Arrowrock, Idaho.....	138	La Grande, Oreg., Grande Ronde River at Lake, Idaho, Henrys Fork near.....	223 40
Hagerman, Idaho, King Hill canal near.. Snake River near.....	114 27, 28	Lake Creek, Idaho, discharge measurements of.....	241
Hailey, Idaho, Big Wood River at.....	95-96	Lake Fork. See Payette River, Lake Fork of.....	
Big Wood Slough at.....	103	Lake Fork Reservoir near McCall, Idaho..	173
Heise, Idaho, Snake River near.....	14	Lake Irrigation District canal near McCall, Idaho.....	175
Henrys Fork at St. Anthony, Idaho.....	46	Lake Walcott near Minidoka, Idaho.....	22
at Warm River, Idaho.....	43	Lapwai Creek, Idaho, discharge measure- ments of.....	242
diversions from, between Ashton and St. Anthony gaging stations, Idaho.....	45	Lardo, Idaho, North Fork of Payette River at.....	189
between St. Anthony and Rexburg gaging stations, Idaho.....	47	Payette Lake at.....	168
near Ashton, Idaho.....	44	Lemhi River at Salmon, Idaho.....	213
near Island Park, Idaho.....	42	Lenox, Idaho, South Fork of Boise River near.....	137
near Lake, Idaho.....	40	Lincoln canal near Richfield, Idaho.....	105
near Rexburg, Idaho.....	48	near Shoshone, Idaho.....	106
Henrys Fork Basin, Idaho, gaging-sta- tion records in.....	56	Little Camas canal at heading, near Bennett, Idaho.....	139
smaller reservoirs in.....	49	Little Canyon Creek near Glenns Ferry, Idaho.....	117
Henrys Lake, Idaho, contents of.....	49	Little Lost River near Howe, Idaho.....	67
Hereford, Oreg., Burnt River near.....	199	Little Lost River Basin, Idaho, gaging- station records in.....	67-68
Hornet Creek near Council, Idaho.....	186	Little Weiser River near Indian Valley, Idaho.....	192
North Fork of, discharge measurements of.....	241	Little Wood River at Campbell Ranch, near Carey, Idaho.....	108
		at Shoshone, Idaho.....	112
		near Carey, Idaho.....	109-110
		near Richfield, Idaho.....	111
		Lochsa River near Lowell, Idaho.....	235
		Lost Creek near Tamarack, Idaho.....	185

	Page		Page
Lost Valley Reservoir near Tamarack, Idaho.....	184	Notus, Idaho, Boise River at.....	134
Lostine River near Lostine, Oreg.....	229	Nyssa, Oreg., Owyhee Reservoir near.....	128
Lowell, Idaho, Lochsa River near.....	235		
Selway River near.....	232	Oakley, Idaho, Goose Creek near.....	85
Lowman, Idaho, Clear Creek at.....	184	Oakley Reservoir near.....	84
Deadwood Reservoir near.....	185	Trapper Creek near.....	85
Deadwood River near.....	166, 187	Oakley Reservoir near Oakley, Idaho.....	84
South Fork of Payette River at.....	168	Obsidian, Idaho, Alturas Lake Creek near.....	209
		Salmon River near.....	203
McCall, Idaho, Lake Fork of Payette River near.....	172, 174	Owyhee, Nev., Owyhee River near.....	126
Lake Fork Reservoir near.....	173	Owyhee Dam, Oreg., Owyhee River below.....	129
Lake Irrigation District canal near.....	176	Owyhee Reservoir, Oreg., Owyhee River above.....	127
Mackay, Idaho, Big Lost River near.....	70-72, 74	Owyhee Reservoir at Owyhee Dam, near Nyssa, Oreg.....	128
Mackay Reservoir near.....	73	Owyhee River above China diversion dam, near Owyhee, Nev.....	126
Sharp ditch near.....	77	above Owyhee Reservoir, Oreg.....	127
Warm Spring Creek near.....	75, 76	at Mountain City, Nev.....	125
Mackay Reservoir near Mackay, Idaho.....	73	below Owyhee Dam, Oreg.....	129
Magie Reservoir near Richfield, Idaho.....	98	near Gold Creek, Nev.....	124
Malheur River below Warm Springs Reservoir, near Riverside, Oreg.....	153	Owyhee River Basin, Nev.-Oreg., gaging station records in.....	123-129
discharge measurements of.....	152	Oxbow, Oreg., Snake River at.....	32
near Drowsey, Oreg.....	152		
near Hope, Oreg.....	154	P. A. lateral near Milner, Idaho.....	86
North Fork of, above Agency Valley Reservoir, near Beulah, Oreg.....	156	Pahsimeroi River near May, Idaho.....	212
at Beulah, Oreg.....	157	Palouse River, South Fork of, at Pullman, Wash.....	239
Malheur River Basin, Oreg., discharge measurements in.....	241	Palouse River Basin, Wash., gaging station record in.....	239
gaging-station records in.....	152-157	Payette, Idaho, Payette River near.....	163
Reservoir in.....	155	Payette Lake at Lardo, Idaho.....	168
Mann Creek near Weiser, Idaho.....	197	Payette River, Lake Fork of, above reservoir, near McCall, Idaho.....	172
May, Idaho, Pahsimeroi River near.....	212	below Lake Irrigation District canal, near McCall, Idaho.....	174
Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho.....	65	near Emmett, Idaho.....	162
near Argora, Idaho.....	64	near Horseshoe Bend, Idaho.....	161
Mesa, Idaho, Mesa Orchards canal near.....	188	near Payette, Idaho.....	163
Middle Fork of Weiser River near.....	187	North Fork of, at Cascade, Idaho.....	170
Mesa Orchards canal near Mesa, Idaho.....	188	at Lardo, Idaho.....	169
Midvale, Idaho, Crane Creek near.....	194	near Smiths Ferry, Idaho.....	171
Crane Creek Reservoir near.....	193	South Fork of, at Lowman, Idaho.....	188
Milner, Idaho, Gooding canal at.....	88	near Banks, Idaho.....	160
Milner low-lift canal near.....	87	near Garden Valley, Idaho.....	159
North Side Twin Falls canal at.....	89	Payette River Basin, Idaho, gaging station records in.....	158-176
P. A. lateral near Twin Falls canal at.....	86	Picabo, Idaho, Silver Creek near.....	113
Snake River at.....	94	Pine Creek (Boise River Basin) above Barry Placer diversion, near Idaho City, Idaho.....	146-147
South Side Twin Falls canal at.....	20	Pine Creek (Weiser River Basin) near Cambridge, Idaho.....	191
Milner low-lift canal near Milner, Idaho.....	87	Pocatello, Idaho, Portneuf River at.....	79
Minidoka, Idaho, Lake Walcott near.....	22	Porter Creek near Gardena, Idaho.....	176
North Side Minidoka canal near.....	81	Portneuf River at Pocatello, Idaho.....	79
Snake River near.....	23	at Topaz, Idaho.....	78
South Side Minidoka canal near.....	82	Portneuf River Basin, Idaho, gaging station records in.....	78-80
Mission Creek near Winchester, Idaho.....	238	Powder River at Salisbury, Oreg.....	200
Monroe Creek, Idaho, discharge measurements of.....	241	near Robinette, Oreg.....	201
Moran, Wyo., Jackson Lake at.....	11	Powder River Basin, Oreg., gaging station records in.....	200-201
Snake River at.....	12	Publications on stream flow by Geological Survey.....	4-7, 9
Moore Creek above Granite Creek, near Idaho City, Idaho.....	140	by State agencies.....	7-8
above Thorn Creek, near Idaho City, Idaho.....	141	Pullman, Wash., South Fork of Palouse River at.....	239
Gold Hill Placer diversion from.....	143		
near Arrowrock, Idaho.....	142	Rexburg, Idaho, Henrys Fork near.....	48
Mountain City, Nev., Owyhee River at.....	125	Richfield, Idaho, Big Wood River near.....	99
Mountain Home, Idaho, Mountain Home cooperative canal near.....	120	Lincoln canal near.....	105
Mountain Home feeder canal near Mountain Home, Idaho.....	119	Little Wood River near.....	111
Mud Creek, Idaho, discharge measurements of.....	242	Magie Reservoir near.....	98
Mud Lake near Terretton, Idaho.....	58	Riordan Creek, Idaho, discharge measurements of.....	242
Mud Lake Basin, Idaho, discharge measurements in.....	240	Riverside, Oreg., Malheur River near.....	153
gaging-station records in.....	58-66	Robinette, Oreg., Powder River near.....	201
Murphy, Idaho, Snake River near.....	30, pl. 1, B	Rock Creek near Twin Falls, Idaho.....	91
		Rockwell bypass canal, Idaho, discharge measurements of.....	240
Neelley, Idaho, Snake River at.....	21	diversions from, discharge measurements of.....	240
New York canal near Barber, Idaho.....	149	wasteway of, discharge measurements of.....	240
North Side Minidoka canal near Minidoka, Idaho.....	81	Rogerson, Idaho, Salmon River Canal Co. canal near.....	94
North Side Twin Falls canal at Milner, Idaho.....	89	Salmon River Canal Co. Reservoir near.....	93

	Page		Page
Rondowa, Oreg., Grande Ronde River at..	224	Stanley, Idaho, Valley Creek at.....	210
Run-off in inches, definition of.....	1	Starkey, Idaho, Weiser River at.....	178
Rush Creek at Cambridge, Idaho.....	190	Stibnite, Idaho, East Fork of South Fork of Salmon River at.....	218
St. Anthony, Idaho, Henrys Fork at.....	46	East Fork of South Fork of Salmon River near.....	219
Teton River near.....	55	Spalding, Idaho, Clearwater River at...	234
Salisbury, Oreg., Powder River at.....	200	Spencer, Idaho, Beaver Creek at.....	61
Salmon, Idaho, Lemhi River at.....	213	Fall River near.....	51
Salmon River at.....	207	Strawberry Creek near Bedford, Wyo....	39
Salmon Falls Creek near San Jacinto, Nev.....	92	Tamarack, Idaho, Boulder Creek near...	222
Salmon Falls Creek Basin, Nev., gaging-station records in.....	92-94	Lost Creek near.....	185
Salmon River at Salmon, Idaho.....	207	Lost Valley Reservoir near.....	184
at Whitebird, Idaho.....	208	Weiser River at.....	177
below Valley Creek, at Stanley, Idaho.....	204	Terms, definition of.....	1
below Yankee Fork, near Clayton, Idaho.....	205	Terreton, Idaho, Mud Lake near.....	58
discharge measurements of.....	241	Teton River, diversions from, between St. Anthony gaging station and mouth, Idaho.....	56
East Fork of South Fork of, at Stibnite, Idaho.....	218	near St. Anthony, Idaho.....	55
near Stibnite, Idaho.....	219	near Teton, Idaho.....	54
near Yellow Pine, Idaho.....	220	Thorn Creek spillway near Gooding, Idaho.....	107
Middle Fork of, near Cape Horn, Idaho.....	214	Topaz, Idaho, Portneuf River at.....	78
near Challis, Idaho.....	206	Trapper Creek near Oakley, Idaho.....	85
near Obsidian, Idaho.....	203	Twin Falls, Idaho, Rock Creek near.....	61
South Fork of, near Knox, Idaho.....	216	Snake River near.....	26
near Warren, Idaho.....	217	Twin Springs, Idaho, Boise River near...	130
Yankee Fork of, near Clayton, Idaho..	211	Union, Oreg., Catherine Creek near....	225
Salmon River Basin, Idaho, discharge measurements in.....	241-242	Unity Reservoir near Unity, Oreg.....	198
gaging-station records in.....	203-222	Valley Creek at Stanley, Idaho.....	210
Salmon River Canal Co. canal near Rogerson, Idaho.....	94	Wallowa, Oreg., Bear Creek near.....	230
Salmon River Canal Co. Reservoir near Rogerson, Idaho.....	93	Wallowa Falls power-plant tailrace near Joseph, Oreg.....	227
Salt River at Wyoming-Idaho State line. near Smoot, Wyo.....	37	Wallowa River, East Fork of, near Joseph, Oreg.....	228
Salt River Basin, Wyo., gaging-station records in.....	36-39	Warm River, Idaho, Henrys Fork at.....	43
San Jacinto, Nev., Salmon Falls Creek near.....	92	Warm Springs Creek (Big Lost River Basin) east channel of, near Mackay, Idaho.....	75
Second-foot per square mile, definition of.....	1	west channel of, near Mackay, Idaho..	76
Second-foot, definition of.....	1	Warm Springs Creek (Big Wood River Basin) at Guyer Hot Springs, near Ketchum, Idaho.....	102
Second-foot-day, definition of.....	1	Warm Springs Creek (Malheur River Basin), Idaho, discharge measurements of.....	241
Selway River near Lowell, Idaho.....	232	Warm Springs Reservoir, Oreg., contents of.....	165
Sharp ditch near Mackay, Idaho.....	77	Warren, Idaho, South Fork of Salmon River near.....	217
Shelley, Idaho, Snake River near.....	16	Webb Creek, Idaho, discharge measurements of.....	242
Shoshone, Idaho, Lincoln canal near.....	106	Weiser, Idaho, Crane Creek near.....	195
Little Wood River at.....	112	Wann Creek near.....	197
Silver Creek near Piacabo, Idaho.....	113	Snake River at.....	31
Small, Idaho, Medicine Lodge Creek near Smiths Ferry, Idaho, North Fork of Payette River near.....	171	Weiser Irrigation District canal near Weiser River near.....	181
Smoot, Wyo., Cottonwood Creek near...	36	Weiser Irrigation District canal near Weiser, Idaho.....	196
Snake River at Calamity Point, near Irwin, Idaho.....	13	Weiser River above Crane Creek, near Weiser, Idaho.....	181
at Clough Ranch, near Blackfoot, Idaho.....	18	at Starkey, Idaho.....	178
Snake River at King Hill, Idaho.....	29, pl. 1, A	at Tamarack, Idaho.....	177
at Milner, Idaho.....	24	discharge measurements of.....	241
at Moran, Wyo.....	12	East Fork of, near Council, Idaho.....	182
at Neeley, Idaho.....	21	Middle Fork of, near Mesa, Idaho.....	187
at Oxbow, Oreg.....	32	near Cambridge, Idaho.....	180
at Weiser, Idaho.....	31	near Council, Idaho.....	179
below Lower Salmon Falls, near Hagerman, Idaho.....	28	West Fork of, near Fruitvale, Idaho..	183
diversions from, between Heise and Shelley gaging stations, Idaho...	16	Weiser River Basin, Idaho, discharge measurements in.....	241
between Shelley and Clough Ranch gaging stations, Idaho.....	17	gaging-station records in.....	177-197
near Clarkston, Wash.....	33-34, pl. 1, C	Whitebird, Idaho, Salmon River at.....	208
near Hagerman, Idaho.....	17	Wickahoney Creek near Bruneau, Idaho..	121
near Heise, Idaho.....	14	Wild Horse Reservoir near Gold Creek, Nev.....	123
near Kimberly, Idaho.....	25	Winchester, Idaho, Mission Creek near...	238
near Minidoka, Idaho.....	23	Work, division of.....	10
near Murphy, Idaho.....	30, pl. 1, B	scope of.....	1
near Shelley, Idaho.....	16	Yankee Fork. See Salmon River, Yankee Fork of.	
near Twin Falls, Idaho.....	26	Yellow Pine, Idaho, East Fork of South Fork of Salmon River near.....	220
South Side Minidoka canal near Minidoka, Idaho.....	82	Johnson Creek at.....	221
South Side Twin Falls canal at Milner, Idaho.....	90		
Stage-discharge relation, definition of Stanley, Idaho, Salmon River at.....	1		
	204		